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VOYAGE

TO THE

ISLE OF ELBA,

&c.

J. G. BARNARD,
Skinner Street, London.

THE MEDITERRANEAN
PORTO FERRAIO
PORTO LUNGONE
CHANNEL OF PIOMBINO
MAP
OF THE
ISLE OF ELBA.
BY I. B. POIRSON.
Geographical Engineer.
Common Leagues of France 25 to a degree.
Piemontese Miles 75 to a degree.

A

VOYAGE

TO THE

ISLE OF ELBA;

WITH

NOTICES OF THE OTHER ISLANDS

IN THE

TYRRHENIAN SEA.

83803

Translated from the French

OF

ARSENNE THIÉBAUT DE BERNEAUD,

EMERITUS SECRETARY OF THE CLASS OF LITERATURE, HISTORY, AND ANTIQUITIES, OF THE ITALIAN ACADEMY, &c.

BY

WILLIAM JERDAN.

London:

PRINTED FOR LONGMAN, HURST, REES, ORME, AND BROWN,
PATERNOSTER-ROW.

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DEDICATION.

TO THE

RIGHT HON. CHARLES LONG,

&c. &c. &c.

SIR,

IF the highest Esteem for private and Admiration of public Character afford good Grounds for a Dedication, I have the best Reasons in the World for desiring to inscribe this Work with your Name. But sincere and fervent as these Sentiments are, they have not entirely influenced me thus to trespass upon you. It is as one of the most intimate and valued Friends of WILLIAM PITT; as one of the firmest Advocates of the Measures of that great Statesman while living, and the most consistent, unvarying, and unchangeable Supporters of his Principles since the Era at which Britain began to deplore his loss;

it is, in fine, as one of the foremost of those Legislators and official Persons, whose Perseverance in the Good Cause has led to that glorious State of Affairs, which confers Interest upon the Isle of Elba, that I presume to beg your Acceptance of this Tribute. Humble as are the Labours of a Translator, I rejoice that they have afforded me this Opportunity of publicly stating with how much Respect and Regard

I have the Honour to be,
SIR,
Your most humble and
Obedient Servant,
WM. JERDAN.

Cromwell Cottage,
27th May.

INTRODUCTION.

THE love of the sciences, the wish to acquire new information, to study men, to weigh with attention, to investigate simply the august truths contained in the great volume of nature, perhaps even the desire to make myself useful, first induced me to commence my travels. The majesty of the Alps, where we discover the elements of the world at its birth, the great recollections attached to this illustrious peninsula, where the genius of the arts and sciences, affrighted by despotism and fanatical ignorance, sought an asylum; the youthful enthusiam which animated me, all induced me to direct my steps towards Italy. I have visited every part of it at different periods, and in different characters (*a*), not

(*a*) I quitted Paris in 1801, under the authority of government, and continued my travels under the auspices of his Excellency the Minister of the Interior, and

as Tristram Shandy would have done, travelling post, in the fear of being overtaken by a fever, but like the philosophers of antiquity, in continually acquiring critical knowledge by remarking every thing novel or unknown (*b*). I have lived in the most celebrated colleges, and among the most learned men, to add their ideas to my own. I have attended the cabinets of natural history, to acquire a knowledge of their curious acquisitions; I have frequented the studies of artists most worthy of that title, to observe their genius, and to form a just estimate of their labours.

I have feared neither fatigue nor inconvenience; I have spared no pains in the prosecution of my researches, and in examining those monuments of antiquity which might recal to my memory the history of the times which are passed, and to make myself acquainted with the various productions of a delicious country, constantly

---

of the most learned and distinguished members of the National Institute of France, up to August 10, 1807, when I landed at Marseilles.

(*b*) Montaigne's Essays, book 3, chap. 9, p. 983.

crowned with the charms of spring, and the riches of autumn.

To identify myself with the people I have visited; to observe them in all the situations of life, I have desired to follow the example of Alcibiades, who was all that a traveller could wish to be, courageous and frugal at Sparta, abandoning himself to the luxury of Ionia; magnificent with the lieutenants of the king of Persia. Like the illustrious shepherd of Artouay (c), who derived all the advantages of early education acquired by the energy of his own mind, the most extensive learning. "On my arrival in a capital, I visited all

(c) Jameray Duval, born in the little village of Artouay in Champaigne, in 1695, was an orphan at ten years of age. At twelve he quitted his country, travelling at a venture during the frightful winter of 1709. Till twenty years of age, he was the guardian of six cows, and the valet of a poor hermitage. At this period his active genius, and an instinct eager and penetrating, conducted him to learning, almost without assistance, by rapid and unbeaten routes. The last sixteen years of his life were passed in the midst of courts, near sovereigns. He always preserved manners the most pure, frankness the most unreserved, and liberty the most independent. He died in 1775.

the public markets, to learn in what productions the country most abounded; I read the newspapers of the place, to form an idea of the civil liberty there enjoyed; I ogled the women, to know if I were in Circassia or in the country of the Samoiedes; I went to the play to study the national taste. The churches, the palaces, the hospitals, gave me an infinity of information; with respect to the people, the useful and respectable source of all national strength, I entered the humblest cottages, and according to the comfort or misery which there prevailed, I judged of the nature of their government; and thus, without being a physician, I felt the pulse of human nature (*d*)." Lastly, I applied myself to learn the language; to read the Italian authors, as well ancient as modern; I extended my inquiries to all classes of society; I travelled over all the plains, vallies, mountains, forests, and coasts; and now restored to my household gods, I am about to col-

(*d*) Memoirs of his Life; letter to his friend Anastasie Socoloff.

lect the results of my labours with care, to judge of all without asperity; and ingenuously to recount every thing I have seen. I implore indulgence for the defects of my style and colouring. In wandering like a Scythian, we soon lose the Athenian polish.

During the long sojourn which I made in ancient Etruria, I studied the monuments of this people, which are too little known; I have followed, step by step, the physical revolutions which this beautiful province, the Attica of Italy, has experienced. I wished also to know the isles of the Tyrrhenian Sea, to compare their constitution with that of the continent to which they are neighbours, in order to satisfy myself, if what Buffon says (*e*) of their being formed by an encroachment of the sea upon the Italian continent, before or at the time of the sudden irruption of the waters of the Euxine, and the Ocean into the Mediterranean, be true.

I have visited each of them. The Island

(*e*) Theory of the Earth, and Epochas of Nature.

of Elba has above all excited my curiosity. Three voyages, made at different periods, have given me opportunities for studying it under every point of view, of bestowing upon it the most serious examination; in a word, of forming a proper judgment: I have applied myself, in the first instance, to discuss the principle of its physical constitution, and to combat, by facts, the established opinion. If, in that part of my work which may be called *systematic*, I have dared to oppose the ideas of many esteemed and learned men, I desire I may not be accused of presumption. It is not my wish to censure *them;* I detail that which I have seen, the consequences which I have thought were thence deducible, and the chain which binds established facts to the constant and immutable laws of nature. I have not drawn my principles from my prejudices, but from the very essence of things themselves. Hereafter naturalists better informed may correct my errors; they, in their turn, will be my critics, and truth, which mediocrity, the spirit of chicanery, presumption, and want

of principle, seek incessantly to veil, will shine resplendent to the eyes of all.

This point once established, I have endeavoured to obtain my end by every possible exertion, so as to leave nothing more to be desired, on the subjects of the natural history, the manners of the people, the extent of the population, the public monuments, and the state of commerce, in this interesting country. To dispel the mists of the chaos of history, I have thought it my duty to reconcile the text of ancient authors with the nature of the soil, the laws of nature and chemistry, with the geographical position and its known relations with respect to neighbouring nations; I have wished to combat errors accredited by respectable names.

Such is the plan, and such is the object of the work, which I this day publish, which I dedicate to my friends, which I offer to the learned who honour me with their esteem, and to those academies to which I have the honour to belong. I invite criticism, that fair criticism which never passes the limits where literary discussions

ought to terminate. I wish to submit it to the observation of persons who have lived in the Isle of Elba, to study its mineralogy, its physical geography, and who have devoted their whole time to these inquiries. I desire that it may be examined by men of learning, who take pleasure in encouraging young authors, who are anxious to set them right where they are in error, and to labour to improve that judgment which personal experience, always circumscribed, leaves imperfect.

There is not any work on the Isle of Elba *ex professo*. The manuscript writings (*f*) which are circulated in the country, and the crude volume published by *Sebastiano Lambardi*, of the port of Ferrajo (*g*), make it very imperfectly known. Actuated by a false love of country, their authors have sacrificed all truth, harmony of style, and

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(*f*) I have read those left by Dr. Fossi, by Captain Giovanelli, and by a person named Ciumei. All three are posterior to the work of Lambardi, which has served for their model.

(*g*) Memoire Antiche e Modern dell' Isola di Elba, in 8vo.

the art of fairly construing the writings of antiquity, without which erudition becomes a dangerous weapon. Seduced by the false statements, *ficta pro antiquis*, of the Dominican de Viterbe; led away by fables sent abroad in the ancient books published by Cuzzio Inghirami, by Fauze, and by Mariani, their imaginations have created a history of the Isle of Elba worthy to belong

"A tempi antichi, quando i Buoipar lavano."

It is, in truth, curious to see them incessantly labouring to bring together all the most incoherent ideas, and drawing from them the most preposterous inferences, which can have no foundation but in their brain; to cite them in an original manner (*h*), to find in the classics, which they torture to serve their purpose at every turn, a sense any thing but that which is

(*h*) It is always in Italian language, very modern, and nothing less than elegant, that their citations are made; and Lambardi (p. 21), above all of them, indicates the passage thus: Calentesus, p. 6 of his writings.

expressed in the text, so often corrupted by the inaccuracy of copyists. They contradict themselves every instant, and possess the art of so mangling the names of authors of which they make use, that approved patience, and more than common perspicuity, are requisite to discover of whom they speak. I will give some examples drawn from the work of Lambardi, because his book is in print, and has served for a model to the others.

Lambardi supports himself generally, and with truly paternal complacency, on the authority of a writer whom he states to have been a Goth (p. 51), and whom he shows afterwards must have beeen much more ancient (p. 52). He names him at one time (p. 17) Celeteudus, at another (p. 51), *Celeutesus*, and afterwards (p. 52), *Celeteusus*. He states him to have been (p. 17) cotemporary with *Annius* de Viterbo, that is, to have lived at the close of the fifteenth century; and further on (p. 21) he makes him combat an opinion advanced some hundred and twenty years subsequent to that period, by the learned Baronius, in

his "*Ecclesiastical Annals;*" an astonishing work for the time at which it appeared, notwithstanding its numerous historical mistakes, the fables which swell its bulk, and the great defects of its style.

If Lambardi wished to allow his favourite author one moment's repose, to recall the Tuscan writers, whom he must of necessity know and understand, it is then that his inferences become more than ever unjust, and that he amuses himself with twisting the names of authors and their texts still more. At page 23, he speaks of the *magnificent Paolo Tornei*, a personage who never existed;—doubtless instead of the Pisan annalist, *Paolo Tronci.* In another part of his book, in speaking of *Giugurta Tommasi*, the historian of Sienna, he converts him into two writers; the one he calls *Jugurtha*, after the King of Numidia, and the other he designates *Tommaso Senese*, &c. &c.

These instances cursorily taken, may shew what confidence is to be placed in him who commits such blunders, and in those who repeat them from ignorance, or

from disregard of truth. I might have been silent on the subject of these works, had I not been persuaded they were at least known to those who, from their situation, from the course of political events, or from taste, have fixed their abode in the Island of Elba.

Citations of authorities form the basis and the essential part of works dedicated to history and learned research. These, it may be said, are their safe-guards.

It is not then for a pompous display of erudition that I have thought it my duty religiously to indicate the sources into which I have dipped, and also the books and manuscripts on which I found myself. I wish to render homage to men who have devoted themselves to literary labours, and to travellers who have visited the Island of Elba. I also wish, at the same time, to give my readers every means of verifying the correctness of my citations; to assure themselves of my impartiality, and of my indisposition to strain the natural sense of the writings of others, to support my opinions, or to further my own views.

The map which I give with this work, is the first that has appeared exactly correct. To my nautical and geographical remarks, I have added the observations made on the mountains of the island by M. L. Puissant (*i*), professor of mathematics at the Imperial Military School in Paris. To render the work still more complete, I have thought it necessary to unite the well-known talent of a skilful geographical engineer, M. J. B. Poisson, and the graver of a consummate artist, M. Tardieu, the elder. I am happy to offer them here, the expression of my gratitude and sincere admiration.

If I have not made any use of the description of the Isle of Elba, prepared last year by Captain Clerc (*k*), it is because it

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(*i*) Treatise of Topography; on Surveying and Levelling, book i, chap. 4, 5, 6, 7, 8, and 9.

(*k*) See the work before cited, plate 1, fig. 9, and book 3. There is a military depôt in relief, on the western point of the Isle of Elba, executed by the same officer in the designs of his picture.

appears to me to be deficient in accuracy and truth in the configurations of the capes, and the depths of the harbours and anchorages, so numerous in this important portion of the world. At the same time, I render homage to the talents of that engineer. If he had personally visited these places, I am persuaded he would have made his work much more complete, more useful to science, and more worthy of himself.

I could have wished to cite in my book that which the learned geologist De Saussure says (*l*) of the Isle of Elba, where he remained for some days (*m*). I should equally have wished for the historical report of the iron-mine of Rio, which Mr. *Leopold Chevalier* read some time ago to the Society of Agriculture and of Arts at Limoges, but it has not been possible for me to refer to it. I regret this the more,

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(*l*) In his Voyage to Italy.

(*m*) *Sennebier*, Mem. Hist. on De Saussure.

as it would have made my book unquestionably better. It is to be hoped that these works will shortly appear. This wish which I form, all friends of science will eagerly support.

TRANSLATOR'S PREFACE.

TO a long French Introduction it would be ill-advised to add a long English Preface. I could not, however, suffer this work to appear, without stating that I have retained all my Author's text, more with the view of giving a perfect idea of the manner in which the Members of the French Institute and men of science in that country direct their inquiries, than because I thought that some excisions might not very advantageously be made. Were Mr. Thiébaut less a scholar, he would be more entertaining; but his facts, his affectation, and his learning, are so interwoven, that it would be no easy matter to eradicate the traces of the one, without injuring the value of the other.

The only liberty I have taken has been to transpose the Chapter on Geology, from the rank of second to that of fourth, as less entertaining to the general reader, than that which I have promoted to its place.

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VOYAGE

TO THE

ISLE OF ELBA.

CHAPTER I.

GENERAL VIEW OF THE ISLE OF ELBA.

OF all the islands which stud the (*a*) Tyrrhennian Sea, so celebrated in the history of the first nations of Italy, there is not one more interesting and less known than the Isle of Elba. Tronsson Decoudray, and *P. Pini* (*b*), have furnished us with some information respecting the celebrated iron mine which it contains; but they have bestowed no notice upon the other parts of the island, and have said nothing of its productions, of the manners of its inhabitants, or of the history of its political revolutions. My

(*a*) The *Tyrrhenum Mare* of the ancients; that part of the Mediterranean which lies on the coast of Etruria.—*Translator.*

(*b*) Journal de Physique, annes 1774 et 1778.

object is to repair their neglect. It is my intention to supply an accurate account of Elba on all these points, and to lay before the public a picture of it, such as it was in former times, and such as it now is. I propose to omit nothing which deserves the regard of the naturalist and antiquary. It is my wish that this work should be useful, and though I am aware that it is not the property of human talent to exhaust the subject which it explores with the greatest ardour, there will not, I trust, be much left for future labours in that which has occupied my studies, and is the source of the following observations.

Sect. I.

Geographical Situation.

The Isle of Elba is situated in the Mediterranean, at the commencement of the sixth climate (*c*), where the longest day consists of fifteen hours and nine minutes, and where the elevation of the Pole is 42 degrees 49′ 6″ 23‴ of north latitude, and 7 degrees 59′ 24″ 38‴ of

(*c*) Astronomers divide the globe into 48 climates, 24 northern, and 24 southern, according to the increase of half an hour in the longest day in summer.

east longitude, calculated from the meridian of Paris.

The channel of Piombino, of which the navigation is extremely difficult, separates Elba from the Continent of Italy. The straits are about ten miles (*d*) across in the narrowest part.

Upon the north are the islands of Capraja and Gorgona; on the east the Rocks of Parmajola and Cerboli, and the Etruscan shore; on the south and south-east the islands of Giglio, Montechristo, and Pianosa; and on the west Corsica (*e*); whence it is distant forty Italian miles (*f*).

Its figure is very irregular. Formed of a soft and light earth, consisting of pulverized wreck from mountains, of reefs, and of flints continually triturated and battered by the winds and by currents and surges of a sea often tempestuous, the shores of Elba present on every side a thousand sharp angles encroaching upon the

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(*d*) This distance corresponds with that laid down by Pliny, lib. 3. cap. 6. The Roman mile was composed of eight Olympic stadia, 600 to a degree, and three miles Roman are equivalent to three miles Italian, or 760.107 toises. The Roman stadium was 120 paces and a fraction.

(*e*) See the article relative to the other Islands of the Tyrhennian Sea, at the end of this volume.

(*f*) As nearly as possible 45½ English miles. See Strabo, lib. 5, page 223, and Diodorus Siculus, lib. 5, page 294.

land, or jutting out into the water, of which, the number and shape vary continually.

The same causes which modify the form of the island, tend necessarily to the diminution of its extent.

In the time of Pliny, if the text has not been corrupted (*g*), the Isle of Elba was a hundred Roman miles in circuit: at present it is not, in reality, more than sixty Florentine miles (*h*), viz.

From Cape della Vita to Cape St. Andrea	22
From Cape St. Andrea to Cape della Calamita	23
And from the latter to Cape della Vita	15
	60

Sect. II.

Names, and their Etymology.

The Isle of Elba was known to the Greeks under the name of Æthalia. Among the Etruscans and Romans it was called Ilua or Ilva, of which the moderns have made Elba. This

(*g*) Lib. 3, cap. 6.

(*h*) Twenty French leagues; or, calculating the Florentine to be the same as the Italian measure, a little more than 68 English miles.

double name is the source of an interpolation which has slipt into all the editions and manuscripts of Strabo (*i*), Ptolemy (*k*), and Pliny (*l*), and also of the error of all those authors who have considered Æthalia and Ilva as two distinct islands. Pierre Victor (*m*), Junius Solin (*n*), Cluverius (*o*), and Dempster (*p*), have pointed out this mistake; but that which most clearly confirms their opinion is the existence of two MSS. (1393 and 1394) of the Philosophical Geography of Amasius of Cappadocia, in which this interpolation does not exist (*q*).

Many authors have amused themselves with investigating and explaining the etymology of these different names. As Travels belong more to History than to Romance, I shall not repeat their reveries. I will only quote the opinions which appear to me the most true, or at least the most rational.

The name Αἰθαλία, or Αἰθαλεία, derived from

(*i*) Geog. lib. 2. p. 123.

(*k*) Geog. lib. 3. cap. 1.

(*l*) Hist. Nat. lib. 3. cap. 6.

(*m*) Lib. 19. varior. lection. cap. 10.

(*n*) De Insulis Tyrrhèn. cap. 3.

(*o*) Ital. Anti. lib. 2, cap. 2.

(*p*) De Etruria Regali, lib. 4. cap. 120.

(*q*) *Vide* the excellent translations of Strabo by Dutheil and Coray.

the Greek root αἴθος, Ardor, was, as related by Diodorus (*r*), Hecatæus of Miletus (*s*), Eustathius (*t*), and Nicander (*u*), given to the Isle of Elba on account of its mines and the furnaces in which the iron was wrought.

The Latin name Ilua, or Ilva, comes from the Greek Ἴλλα, a forest, of which the people of Latium formed Sylva, by substituting the letter S for the accent, which the Etruscans pronounce without an aspirate. This appellation was bestowed upon Elba, according to my learned colleague Lanzi, from the prodigious quantity of wood which covered its mountainous soil (*x*).

Touching on the name of Elba, the erudite Mazocchi, who thinks with Maffei (*y*), that the Etruscans were a colony from the land of Canaan and the Moabites, is of opinion that the origin of the word is Hebrew, ערדה, expressing Erva (*z*), from the nakedness of the workmen covered with sweat and smoke, while they toiled at the foundery in melting the obdurate iron.

(*r*) Bibliot. Hist. lib. 5. p. 294.

(*s*) Quoted by Etienne of Byzantium *de urbibus et* popul. p. 58.

(*t*) Parechb. in Iliad, A. p. 153.

(*u*) In Theriaca, V. 472.

(*x*) Sagg. de Ling. Etrusc.

(*y*) Italia Primit.

(*z*) Diss. sopra, l'origine de Tirreni.

CHAPTER II.

Population, Natural History, Agriculture, and Industry.

Having devoted the preceding pages to a general view, and more particular geography of the Isle of Elba, I shall now proceed to a description of its population, agriculture, industry, and natural history.

Population is the first source and irrefragable evidence of prosperity; agriculture is the element; industry the result. Without population there is no power, without agriculture and industry there is no real wealth.

The creation of man is the task of nature; to aid the development of his faculties, and to preserve him, is at all times the duty and interest of governments. To attain this desirable object, the naturalist examines the soil, the animals which it nourishes, the plants to which it gives birth, and the minerals which it contains; the philosopher studies the manners and the customs of the people, the just effect of laws, and the true bearing of institutions; the political economist investigates and calculates the re-

sources of every kind which a country altogether presents.

Without venturing to flatter myself that I shall be able to fulfil this triple design, I shall endeavour in this chapter to collect materials which may furnish hints for the amelioration of the condition of the inhabitants of Elba.

SECT. I.

Population and Manners.

THE Isle of Elba was peopled long before the use of that iron which it furnishes so abundantly was known: before Rome was built (*a*). The Etruscans were its first occupants. Its population must have been very considerable, as we know from Virgil that it contributed three hundred chosen soldiers to Eneas in his wars with Turnus (*b*). Silius Italicus also informs us, that after the unfortunate day of *Trebia*, it sent (the

(*a*) I found this assertion on a precious memorial discovered in the bosom of the earth in the Isle of Elba. It is the point of a lance made of a siliceous stone or petrosilex. I saw it in the cabinet of my learned friend Gio Fabbroni at Florence. This monument of the highest antiquity recals to memory that piece of a stone anchor which is said to have been left by Jason in the city of Ea, and which the inhabitants preserved to the time of Arrian.

(*b*) Eneid, lib. x. v. 173.

same number with Sicily) three thousand excellent archers, armed and equipped, and a vast quantity of arms, to the Roman consuls (*c*).

In 1778, the Isle of Elba contained scarcely eight thousand inhabitants. At present (1808) the number amounts to nearly twelve thousand. From a comparative calculation of the births and deaths, it appears, on an average estimate, that the births are equal to one in twelve, and the deaths to one in twenty-three.

The character of islanders is always marked with some original *traits*. The peculiarities of the Elboise, of which I am about to treat, have strongly interested me.

Remarkably attached to their native soil, the inhabitants of the Isle of Elba love labour; and in the hour of common danger they are all soldiers. Like the early Romans, we observe them with equal pleasure and eagerness pass from the cultivation of the earth to the toils of the camp. Oftener than once they have been seen repulsing the hordes of barbarians who sought to invade their country, or reap their harvests. Pianosa, whence they procure a large quantity of grain, is still red with the blood of Turks slain by them in defence of their rights. They have, indeed, been sometimes overcome,

(*c*) De Bello Punico, lib. viii. v. 612.

but their despair and boldness have rescued them from the horrors of a long and oppressive slavery.

The Elboise are, in general, good and hospitable, and bear no resemblance to the Pheaceans; (that slanderous people, of whom the wise Nausicaa speaks to the subtle Ulysses) (*d*); but, like all weak nations, they are flatterers.

They are of an ordinary height and well made, robust, and of an excellent constitution; they are born seamen, are passionately fond of the chase, and of all manly exercises. Their hair is generally black, their complexion brown, and their looks lively and penetrating. The active and frugal life to which they are accustomed contributes to render them hardy, ardent, and brave, and to preserve their health.

Although education, which always exercises a direct and material influence upon the habits of life, and upon the happiness or misery of mankind, is much neglected in the Isle of Elba; although perpetual revolutions and violent commotions, which have so often struck at the root of the security and property of the people, have imparted to their character a singular degree of asperity, the Elboise do not inherit that spirit of hatred and revenge which is the distinguishing

(*d*) Homer Odyss. 6.

feature of some other nations. They have neither the ferocity of the gloomy Sardinian, nor of the fiery Sicilian. I have not discovered among them either the cunning, the laziness, or the listlessness so natural to a southern people. They are extremely irritable, and impatient of contradiction; more addicted to superstition than to fanaticism, and almost universally ignorant and credulous. They are nevertheless endowed with a certain sprightliness of imagination, which renders them capable of receiving the strongest impressions; thence proceeds their excessive predilection for extravagant and romantic tales, for all that belongs to the marvellous, or is connected with quackery and deception. They are unacquainted with the monstrous luxury of cities. A hat of black straw, a white boddice, a short petticoat of red or blue, is the whole attire of the women. A flower, ribbons, a huge ring, large ear-rings, a gold chain (of which the precious metal is lost in alloy): these are the objects of a female coquetry, which is not destitute of charms.

In Elba, the vital current is of pure quality. The old men are not decrepid. I have known many of them who had reached their ninety-fifth year without experiencing the slightest ailment. The women are not in general beautiful; I have, however, met with pretty girls in the western mountains, and at Rio. They press

their swelling bosoms under enormous busks laced tight with ribbons. This troublesome custom, at once absurd and barbarous, is among them the cause of a forced and disagreeable prominency in front, and imparts an unpleasant stiffness to their arms and motions. They are excessively jealous, and possessed of a high degree of sensibility. At the age of thirteen or fourteen they are marriageable; but when they arrive at thirty, they quickly become old, and exhibit at this age many symptoms of having reached a far more advanced period of life. They are good mothers, entirely devoted to their families, punctual and faithful in the discharge of all their duties.

The food of the inhabitants consists of dried pulse, cheese made from the milk of ewes, of which the smell and taste resemble bad grease, good bacon of a light quality, salted and smoked provisions, coarse bread, fresh fish, of which the tunny is the chief, and a very few vegetables. The salted cheese of Sardinia is an article of great consumption. They also eat an immense quantity of chestnuts, the crop of which is gathered towards the end of October. After they have been dried by the fire till their double rind peels off, they are ground in the corn mill with the upper grindstone raised to accommodate their bulk. The flour produced is not mixed with bran; it is soft, saccharine, and of a yel-

lowish gray colour, which approaches nearer to white in proportion as the chestnuts have been carefully picked and dried with attention. This flour combines and hardens when squeezed together. In order to preserve it, it is necessary to shut it up in a dry place, to compress it with considerable force, and to cover it over to the depth of two or three inches with ashes or sand. The Elboise make from it *pollenta* and pastry, far superior to any which can be manufactured from maize.

The strictest economy prevails in their use of food. It is only upon holidays, that fresh meat, and a white wine, rendered excellent by the utmost care in making, are permitted to be placed upon their tables. On ordinary days, they breakfast upon *pollenta;* towards noon they eat bread and beans, lentils, or some other species of pulse boiled and seasoned with oil; and in the evening their repast is soup, and sometimes salt fish, or such as the sea yields.

Their houses are low: the interior arranged with neatness; and the furniture simple, but solid.

All their kitchen utensils are of baked earth, which they import from Naples and Tuscany. Their beds are remarkable for their size; three, four, and often six persons sleep upon them together. One is frequently held to be sufficient for a whole family. The use of these beds, so

common in Italy, may be traced to the era of the brilliant age of chivalry. In the seventeenth century, their counterparts were to be seen in France and Germany.

The inhabitants of the towns, as is usually the case, bestow more regard upon their tables and habitations. They enjoy the most excellent bread, meats and fish, vegetables and fruit, the chief part of which they procure at a heavy expense from the continent.

At Elba, the pleasures and diversions of the people are not of the liveliest description. Dancing is the favourite amusement of the young, but it wants that expression of sentiment, that vivacity of movement, and that variety of attitude, which are so enchanting in the countries of Rome, Naples, Tarentum, Pouille, and Calabria. Even in the time of harvest there is little gaiety; the corn is thrashed out under a burning sun, and in the evening we do not hear, as on the plains of Tuscany, the violin or the mandoline announce that the toils of the day are at an end—that every heart is happy; the pleasures of the table do not here cause the neighbourhood to resound with the joyous shouts of the labourer. The period of the vintage is the carnival of the cultivators of the vine. Mirth is then most obstreperous, and while the grapes are gathered, echo is taught to repeat the loud notes of musical instruments.

The amusements of the Elboise are few in number, and little diversified. The principal are races, the game of bowls, ninepins, quoits, and a kind of tennis, in which they employ the hand, and sometimes the wrist, armed with a sort of wooden bat, cut into the shape of a pine apple.

Among the young men, as among the Greeks and Liparots, it is a disgrace not to be able to row and navigate a bark. They also attach a high estimation to being the best marksmen at a butt.

The diversions of the women, principally engaged in the cares of housewifery and in attending to the cattle, are more monotonous and quiet.

Licentiousness is at all times an indelible stain upon the female character. Although garrisons have introduced it into the towns, and it has thence spread into the interior of the island, the corruption consequent thereupon is not by any means equal to that which prevails in Italy.

The language of the country is a *Patois*, of which the radical words are in the Tuscan dialect: it is of easy pronunciation, and far from disagreeable. The amusement in which the people take the greatest delight, is that of the Improvisatore, or recitations in verse upon a given subject, on their days of festivity, and in their taverns. As at Florence, Rome, and Na-

ples, I have recognised in these songs entire pieces from Tasso, Ariosto, and Metastasio, which the *Improvisatore* has adroitly adapted to his own subject.

The colonies which repeopled the Isle of Elba after the devastations of Barbarossa and Dragutt, came from Naples and Tuscany; owing to this, it is by no means uncommon to find in particular families the habits of the metropolis; and in the midst of gentleness, ease, and natural feeling, we encounter the studied politeness and gravity of the Tuscans, the gross manners and the ungracious behaviour of the Neapolitans, and the vices which spring from selfishness, whether allied to love, ambition, wealth, or passion.

The practice of carrying stilletoes, and of employing them on the most trivial quarrels, a practice so common among the Genoese and Romans, does not exist in the Isle of Elba. I have also been assured that the indigenous inhabitants held it in abhorrence, and that there has not occurred a single assassination of this sort within the memory of man.

Robbery is very uncommon; murder still more rare.

The number of paupers is very inconsiderable. An active inclination to love and succour their fellow-creatures, influences the Elboise to dimi-

nish, without relaxation, the number of the poor.

Sect. II.

Mines.

The Isle of Elba abounds in iron; *ferri feracem Ilvam*, says Solin (*e*). It also possesses mines of copper, but the opinion that it produces gold, silver, and lead, is a mistake, into the continual repetition of which, the most esteemed philosophers have been led.

I shall enter into some details upon the subject of the mines, when I come to treat of the topography of the island (*f*).

Sect. III.

Agriculture and Botany.

The soil of the Isle of Elba is throughout hilly, unequal, and unfertile because it is uncultivated. The depth of the vegetable earth, it is true, is not considerable, but the slightest labour is sufficient to render it productive. There are districts susceptible of culture (*g*),

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(*e*) Polyhist, cap. 3, de insulis Tyrrhen.

(*f*) Chap. v.

(*g*) The plain of Acona, and the environs of Lungone, Capo-Liveri, and Porto-Ferrajo.

which are too much neglected. The crop of corn is almost nothing; it would hardly supply the wants of the inhabitants during one quarter of the year. This sterility will soon disappear, since they have begun to grub and clear the ground. I have, however, seen few ploughs. The cultivated land which does exist, is generally opened with the spade, or the unwieldy *fossoir* (*h*). Towards the middle of June the corn harvest is reaped with the sickle as close to the earth as possible, according to the ancient manner in Umbria (*i*). They lay down each gavel in the way they have cut it, and then separate the ears from the straw; the former they throw into baskets or hampers, to be carried to the barn-floor; the straw remains upon the field.

They also raise in Elba maize, pease, beans, and other species of pulse. Of flax the produce is very small, and hemp is not cultivated. The thread which they use is manufactured from the leaves of the numerous aloes with which the fields of Lungone are covered.

The pasteque (*Cucumis anguria*, L.) neither

(*h*) The fossoir resembles the grubbing-axe used in vineyards, with its two corners somewhat elongated. The whole tool is inconveniently large and heavy.

(*i*) Varro de Re Rustica, lib. 1. c. 50. Columella, lib. 2. cap. 21.

attains the size nor the excellence of those in Viarreggio, and other Luccaese districts. In the month of August, however, its freshness and sweet pulp renders it one of the delicacies of Elba, not the least grateful to the palate. They are sown in the beginning of April, and cultivated in the same manner with the common melon. They prune the plant when it blossoms, and at the period when the fruit is set.

In this island gardening is not the art of varying the productions of the earth, nor of providing the cook throughout the year with the most useful and necessary kitchen herbs, such as spinach, lettuce, cabbage, &c. Sorrel, chervil, cibol, parsnips, are unknown. Nothing can equal the indifference of the inhabitants for this species of culture.

Pasturage is rare, but of an admirable quality. Artificial meadows would succeed almost in every part. Experience has demonstrated that the vigorous lupinella (the *trifolium incarnatum*, L.) is well suited to barren coasts.

The Isle of Elba contains a sufficiently ample store of all the species of fruit-trees common to Europe, except the apple. They are generally ill cultivated, and their quality is not of the best kind. Pears, cherries, peaches, and prunes, arrive at perfect maturity; but they are rather of the wild sort, and their flavour is insipid. The

apricot is rare, and very difficult to raise. The lemon, the pomegranate, and the orange, thrive, but their fruit does not possess the most perfect taste. Figs and chestnuts are very plentiful. The olive and the mulberry, which they have received from the industrious Luccaese, flourish throughout the greatest part of the island; but do nothing more than vegetate in the neighbourhood of Marciana and Poggio. The Carob tree yields a pulp blackish and luscious, which possesses the virtues of Cassia (*k*), and the Service-tree, a very astringent bark, which might be made a substitute for the gall-nut.

The vine is fine, and too abundant, because it too frequently occupies a soil which would much better suit the cultivation of corn. The grape is of an excellent quality. The red wine is in small quantity, but exquisite. The white, on the other hand, is common, and consumed only in the island. It might be made much better if they took pains to render the fermentation more perfect, and if the casks in which it is

(*k*) On all the coast of the Mediterranean, the carob fruit serves only for the nourishment of beasts. After proper fermentation, an excellent brandy may be obtained from it, which retains, indeed, something of the odour of the fruit, but is not unpleasant to the taste, and the liqueurs made from it are not inferior to any used in commerce. Professor Proust, of Geneva, made this discovery.

kept were made of thinner staves, and of other wood than that of the chestnut-tree (*l*).

The vine is cultivated in the same manner as in the north of France, Germany, and England. In order to support it, they make use of reeds (the *Arundo donax*, L.) which they raise for this purpose on the borders of the rivulets in places where the ground is moist. The vintage is in September.

The use of the press is unknown in the Isle of Elba, as in the rest of Italy, where they still continue to make wine in the same way they have done for two thousand years, and almost with the same kind of utensils. They throw the grapes into the vats; there the fermentation goes on from eight to fifteen days, during which, it is squeezed only three times. They then draw off the clear liquid. This first operation terminated, they take the husks, which the action of the air has soured, in order to manufacture it into vinegar. As for the lees, upon a vat of eighteen barrels they pour five barrels of water, mingle the whole together, and

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(*l*) The wood of the chestnut-tree is very porous, the wine penetrates it with the greatest facility, and is continually evaporating to the outside.

in twenty-four hours obtain from it a very agreeable piquette (*m*).

The Isle of Elba produces two sorts of dessert wine, which are highly esteemed, *Vermout* and *Aleatico*. The first of these wines is of an agreeable perfume; it is mixed with wormwood, and made of the choicest grapes. The Aleatico is also expressed from a superior red muscadine grape, of a rich bloom, slightly oval, pointed at the extremities, and of a middling size; the clusters are very loose; and its leaf, like that of the muscadines of a very dark green, is deeply indented, and almost palmated.

This delicious wine may enter into competition with those of Monte-Catini and Monte Pulciano, when they have lost their intoxicating odour. Every proprietor attends personally to the making of this liqueur wine; a process which they are very tenacious of keeping a profound secret. It consists in the evaporation of the aqueous part of the grape before the juice is expressed, in the fermentation more or less prolonged, and at last, in the addition of some spirituous liquor, such as rum.

There is the greatest want of wood fit for

(*m*) A tart wine used by the lower orders of the people.—*Translator.*

carpenter's work. The improvident consumption of thirty years has completed the scarcity which they now experience. Wood for fuel is still more rare. The island affords nothing beyond a meagre underwood, the chief plantations of which are at Monte-Giove, the valley of Tre-Acque, and Mont de Fonza. The oak, though endowed with the hardiest formation, does not arrive at that pitch of peculiar beauty, or at that majestic height which made it the earliest object of the religious worship by which it was consecrated, and which still renders it the greatest ornament of the ancient forests of Helvetia, Caledonia, and the highest mountains of France. Its branches do not display the stamp of ages; it is not in Elba, the patriarch of the vegetable world. Neither do we find here these two fine varieties of pine (Pinus Pinea, and P. Sylvestris), the fruits of which are so agreeable, which form magnificent forests among the Apennines, and produce the most excellent building timber. In a word, forest-trees are wanted throughout the island.

Elba has not, however, been always thus circumstanced. Diodorus (*n*) speaks of its iron works. It still contained them at the era of the Republic of Pisa; and in the thirteenth

(*n*) Bibliot. Hist. lib. 5.

century it was covered with wood (*o*). The last of these works was that which, about the year 1589, was still in existence on the back of the mountain which skirts the beautiful road from Porto Ferrajo to Lungone (*p*). At present, all the iron works in the island are destroyed; they have no wood, and they are obliged to transport the ore to Corsica, the coast of Genoa, and the shores of Tuscany, in order to have it manufactured.

It is thus that in old times (*q*) Avola and Molili, celebrated for their fine plantations of the sugar-cane, which they had received from Asia, and learned to render more productive than the mother country, transferred to the Canaries and islands of the torrid zone, the riches of this precious reed, and the monopoly of the princi-

(*o*) The considerable masses of iron dross which I have found in the chain of mountains, which stretch from Porto Ferrajo, in the territory of Campo, to Acona, the declivity of Monte Arco, &c. is an uncontrovertible proof of this fact.

(*p*) Antonio Magini, of Padua, who, in 1597, published his Italian translation of Ptolomy, says in his notes, that at the time when he wrote, they could not work the iron in Elba, on account of the scarcity of wood.

(*q*) Under the reign of the intrepid Roger I. of Sicily, who died February 26, 1154.

pal branch of the commerce of Sicily during the middle ages.

Among the vegetables of the Isle of Elba, I have seen, not without astonishment, the American agave, (the aloe) and the Cactus opuntia (r), attain a height at which those produced in other parts of Italy never arrive.

The American agave, which belongs to the liliaceous tribe, bears numerous leaves of five or six feet in length, and covered with prickles. They are impregnated by a reddish brown, and very bitter mucilage, retained by an immense quantity of parallel fibres. In America, and latterly in Spain, they are advantageously substituted for hemp. They are converted into cordage, into a coarse kind of packing stuff, and also into a thread, which adds to the whiteness, the gloss of silk. The Sicilians have assured me that, in certain districts of that island, they possess the art of communicating to this thread, which they call *zappara*, the flexibility in which it is deficient. We have seen for many years in Paris a large manufactory successfully employ a considerable quantity of the threads of aloes in making bridles, and reins for carriages, watch strings, curtains, &c. &c.

In order to extract the filaments from the

(r) Commonly called the Indian fig.

leaves, it is sufficient to bruise them between two rollers, and to wash and comb those which remain between the hands.

The stalk of the agave shoots up to the height of about eighteen or twenty feet, and is covered with flowers of a yellowish green colour. It blows every year in the Isle of Elba.

The Indian fig, that interesting tree, of which the negroes of St. Domingo make canoes, plates, dishes, and other household utensils, grows in the isle among rocks, and in the poorest soil, as it does in India, South America, and the Coast of Barbary. It rises to from twelve to twenty feet. Its appearance is very singular, owing to the shape of its joints, and the manner in which it propagates itself. It throws out from its branches long shoots, which resemble rods. When these reach the earth, they take root, and give birth to new stalks, which also in turn, multiply their offsets on all sides, and without interruption. This tree is always green, and flourishes during many ages. Its flowers are yellowish, their stamina contract on being touched, and the fruit which they yield is a fig of a deep red colour. Its leaves are large, oval, spiked, a little downy on the under side, tough as leather, and very strong; they sustain the precious insect which furnishes cochineal (coccus opuntiæ) of which, the brilliant tint surpasses the boasted Tyrian purple. They might,

by encouraging it, make this plant useful in the production of cochineal (*s*), and open to the Isle of Elba, a new branch of commerce.

Aromatic plants flourish throughout Elba in the greatest profusion. The inhabitants use them daily in their kitchens. Balm, mint, hyssop, thyme, rosemary, many sorts of sage, and fennel, lavender, eglantine, and myrtle, everywhere perfume the air with their sweet scents, and delight the eye by the variety of their flowers.

The cryptogamia are very numerous. The botanist distinguishes many interesting specimens, and the painter also gathers a great number, which furnish him with colours as beautiful as they are permanent. I should particularize the *Lichen Rocella*, known under the name of *Orseille d'herbe*, which is found in prodigious quantity on the old walls and ruins; it yields a very good yellow tint.

(*s*) This insect, in St. Domingo, occupies the territories where the heat is always at from 20 to 25 degrees at noon, and in Mexico it is to be found in districts, in which the heat varies daily from 9 degrees at midnight during winter, to 20 or 25 at noon. Thierry de Menonville Traité de la Culture du Nopal et de l'education de la Cochinelle.

Sect. IV.

Animals.

The Isle of Elba being, as may be asserted, destitute of pastures, is without cattle; there is nothing but asses, some mules, a miserable species of indigenous horses, a few oxen and cows; and the breed is in general very small. The blades of maize and of the reeds supply them with abundant forage during the dry season. The number of pigs, sheep, and goats, is more considerable; but the breed is no better than that of the other animals.

Though the country is extremely suitable for bees, hives are very uncommon. A small number of persons employ themselves in the lucrative and easy production of honey. No silk-worms are to be seen, though those two valuable insects would thrive well here, and prove a new source of wealth to the inhabitants.

The sportsman finds abundance of game. The bushes and fields are full of partridges, rails, quails, blackbirds, larks, wood-pigeons, the thrush, called by the Greeks συκοφαγος, fig-eater, doves, starlings, and other birds. The island is also frequently visited by many birds of passage, as the wild duck, the king's fisher,

the crane, the bustard, &c. The hare, rabbit, hedge-hog, marten, otter, and squirrel are likewise found here.

Some wild cats are occasionally met with. About the middle of the 17th century, the island was so overrun with rabbits, that the farmer every year saw his fields laid waste and his hopes blasted. To put a stop to their ravages, a great number of cats in kitten were turned out in the districts which were most infested. They pursued the rabbits into their very burrows, and in a few years reduced their number. It was in the same manner, according to the celebrated naturalist, Spallanzani, that the inhabitants of the little island of Baziluzzo destroyed their rabbits, the only animals residing on that spot, formed of the lava, ejected from the burning womb of Stromboli. It was the cat also, that noxious animal, as Buffon says, designed to destroy others still more noxious, which cleared the island of Procida, of moles, rats, and mice, which had there multiplied to such a degree as to commit great depredations, and even to devour infants in their cradles.

There are no deer, wolves, or foxes in the Isle of Elba. The race of wild boars was destroyed a few years ago. It is not very long since Cape Sant Andrea, near Marciana, Cape Pero, overgrown with underwood, in the district

of Rio, and the environs of Campo abounded with those animals.

The fields are infected by a great number of reptiles. There you meet with the smaller scorpion, the blind-worm, the adder, multitudes of asps and the viper, whose bite is venemous; the green lizard, and after the warm rains in summer such quantities of small toads, that it is scarcely possible to stir a step without treading upon them. Some of these last however I have seen grow to an extraordinary size.

I found in the island all the insects of Italy, a great number of flies and gnats. The *blatta orientalis* swarms here. In July, 1806, the fields were covered by the species of grasshopper, called by Linnæus and Fabricius, *gryllus migraterius;* which made great havoc there, as well as at Sienna, Voterra, and in several other parts of the coast of Etruria.

Among the spiders I have found the spotted, which the distinguished entomologist, Pietro Rossi, of Pisa, in his *Fauna Etrusca*, denominates *Aranca XIII. gultata.* It is of a bright shining black, marked with three rows of blood red spots, to the number of 13, 15, 16, and 17; the abdomen is round, protuberant at the upper part, and marked with four very black spots, arranged in a perfect square. The whole body is covered with hairs, and attached to the thorax by a short

pedicle; its eyes are fawn-coloured, and eight in number, and the thorax is very small. It spreads its web close to the surface of the ground and rushes with prodigious velocity upon its prey: it attacks the scorpion, in particular, with great fury, and is extremely fond of its blood; it shuns the society of its own species. It generates towards the end of summer, and envelops its eggs to the number of between 200 and 400, in a cocoon of white silk, compact but not strong. In winter it retires among large stones, into the clefts of the rocks and old walls, where, in a torpid state, it awaits the return of spring. Its bite is very dangerous; it is mortal even to man. Its venom is of a highly subtle nature, and the more active the more intense the heat. I have not learned that it has done any mischief in the island, doubtless for want of particular observations on the part of medical men, for I know that in the Volterrano, several country-people and domestic animals have died in consequence of its bite.

Sect. V.

Industry and Commerce.

Industry, that indefatigable improver of the resources which Nature is incessantly presenting

to man, that eternal principle of activity, labour and perseverance, seems here to be reduced to the first elements of domestic economy. Apathy is the poison which, conjointly with corruption of manners, of which it is an evident sign, corrodes the vitals of states, and destroys the most judicious institutions. The Isle of Elba has deeply felt their effects.

According to the artisan, his earths are at the present day not susceptible of being vitrified. Without going back, however to the periods distinguished for the majestic works of the Etruscans and the rapacious ambition of the Romans, the bricks employed in building Porto Ferrajo and Lungone, are of good quality as to the material, and perfectly well burnt. The red clay, *argilla vitrescens* (*t*), of which they are made, was dug at the place called Lo Stioparello, near Marciana, and the plain contiguous to Marignoli. The kilns were at the foot of Mount Fabrello, where ruins and scattered fragments of them are still to be met with. At present the workmen, either owing to their necessities or their ignorance, no longer possess the art of making bricks, nor of burning them to the highest degree that the material will bear,

(*t*) It is still found at Campo, Sechetto, Rio, Santa Catarina, L'Acona, &c.

and thus giving to the natural gluten of the clay the consistence necessary for the use for which it is intended.

The commerce of the island consists in the the importation from Leghorn and Marseilles of grain, cheese, cattle, and other articles of prime necessity; and in the exportation of tunny, common wine, salt, Vermout and Aleatico wines, vinegar which is in great request, granite, and above all, of ore.

There are no manufactures in any part of the country. In this respect, Elba is tributary to the coasts of France and Italy. The only kind of machinery to be seen there is that of the corn mills, where the simplest processes and methods of management are yet unknown.

The salt marshes which are very numerous on the gulf and in the environs of Porto Ferrajo and Lungone, will always prove more detrimental to the salubrity of the atmosphere and the public health, than they can possibly be commercially advantageous, as long as so little attention is paid to their superintendence. The purifying basins are too numerous, and the pans not well managed. The partitions and walks are of beaten earth. Their annual produce is 60,000 sacks, of about 150lbs. each. The magazines for the reception of this article, the use of which is not less ancient than universal and wholesome, are

fine and commodious structures, especially those erected by the Grand Duke Leopold, at the point of Cape Bianco.

Oysters of different sizes, some of which contained pearls, were formerly caught off the coast of the island. This fishery has long ceased here as well as on the coast of Persia, South America and Sweden, in consequence of the greediness of the inhabitants who have exhausted the beds, and of the anchoring of vessels along the shore. The falling of the cliffs undermined by the waves, and the quantities of ballast imprudently thrown overboard by seamen in violation of the maritime regulations, are likewise circumstances which have hurt this interesting fishery. Guthrie's *Geography* erroneously states that it is still carried on. It was not without great trouble that I met with a few small oysters near the rocks of Cape Sant Andrea, and at Cape dell' Enfola, the pearls of which were about the size of a common pin's head. They are of a very fine colour.

The tunny, *scomber thynnus*, annually visits the coasts of Italy in shoals. The fishery is very considerable, and forms an essential branch of the commerce of the Isle of Elba. It takes place twice a year: the first begins about the 15th April, and ends in the beginning of July; the second, called the *return fishery* happens in September and October. It is carried on at

Porto Ferrajo and Marciana. The fishery in the gulf of Porto Ferrajo, revived in 1585 by the Grand Duke Francis I. is of very ancient date. Strabo speaks of it (*u*) and makes mention of the observatory, Θυννοσκοπεῖον, of Populonia (*x*), where persons watched the arrival of the tunnies and their entrance into the enclosure of nets (*y*). This fishery lasted in those times from the rising of the Pleiades to the setting of Arcturus (*z*).

This is a truly curious, but at the same time, a barbarous sight; it is a period of festivity for the country. The sea is covered with boats; joy sparkles in every face; all eyes are fixed upon the nets; the tunnies arrive, they enter and fill all the chambers of the vast enclosure; they are pierced with a very sharp iron harpoon with two prongs, and the gulf is soon reddened with their blood (*a*). The fishermen sometimes kill sword-fish, dog-fish, and dolphins, which

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(*u*) Lib. 5. p. 223.

(*x*) The rock on which this observatory stood is still called *Punta delle Rete* and *della Tonnarella.*

(*y*) Εἰσὶ δὲ καὶ Θυννοσκοπεῖον ὑπὸ τῇ ἄκρᾳ, *est et specula in promontorio, unde thynni observabantur.*

(*z*) From the 48th day after the spring equinox, to the 4th day of the Nones of November.

(*a*) Fischer in his *Picture of Valencia* has given an animated description of this fishery on the Spanish coast.

Translator.

prey voraciously upon the tunny, and pursue it into the very nets.

The fishery of Marciana, established very soon after the other is extremely productive, surpassing that of Porto Ferrajo by more than two-thirds. It is carried on at the place called Il Bagno.

The annual amount of these two fisheries is estimated at 60,000 francs (£2500 sterling). Out of the produce, the contractor engages to give a certain sum to the hospitals.

The oil made in the island is sufficient for the consumption of the inhabitants; but as an article of commerce, or rather of exchange, it is of very little importance.

Sect. VI.

Diseases and their Causes.

The happy constitution of the people of Elba, and the salubrity of the atmosphere of their island, ought to prolong human life to a very advanced period. But how many causes, rendered less striking by habit, weaken or destroy that principle of longevity which the purest climate tends to develop with such extraordinary advantage! The constant use of

salt meat, coarse bread, and bad wine, is continually producing a great number of diseases. The whalebone stays, in which the women and children are encased, occasion deformity and disorders of the chest. To pregnant women, in particular, their effect is attended with the most hurtful consequences.

The diseases peculiar to the Isle of Elba are intermittent fevers, mild and malignant; putrid, bilious, spotted and gastric fevers, and jaundice; cutaneous diseases; dropsy and dysentery. Of the disorders peculiar to the towns I shall say nothing. It is well-known, that in those theatres of all the passions, these afflictions assume more violent characters, according to the situation of the place, the way of life of the inhabitants, the nature of their food, water, &c.

Scurvy, inflammation of the lungs and of the eyes are very frequent. Certain female disorders may also be said to be habitual.

The causes of these local diseases originate in the putrid exhalations from the stagnant waters and salt marshes; the dampness of the nights; the cold and abundant dew that takes place at dusk; the variableness of the winds, and other accidents of weather, and above all, the hot, moist south winds which almost always blow here.

A practice by which diseases otherwise the

most easily cured, are rendered tedious, dangerous, and often fatal is the habit of taking opium, of giving heating sudorifics, such as sage and ginger infused in wine, for all kinds of disorders, and even such as proceed from inflammation.

Dr. Corsi, of Porto Ferrajo, informed me, that in the autumn of 1801, an epidemic disease prevailed in the island, but more particularly in the above-mentioned town, and made great havoc among the natives only. It was a *typhus*, which, according to his account, exhibited all the symptoms of the most alarming contagion. It first made its appearance in the towns of Porto Ferrajo and Lungone; and the crowded state of the hospitals increased its violence. The pure and refreshing north winds which regenerated the atmosphere facilitated its extinction.

Sect. VII.

Hospitals and Prisons.

There are two hospitals in this island: that of Lungone is handsome, judiciously arranged, airy, and contains 180 beds. The hospital of Porto Ferrajo, situated in the highest and healthiest part of the town to the west of the fortress il Falcone, contains 250 beds in five not very spacious wards. They are well ventilated, it is

true, but the beds stand three or four deep, at a very small distance from each other, and most of them, small as they are, must serve for two patients. Thus are human sufferings multiplied in the very institutions established for their relief. On the other hand, the dispensary is excellent and well supplied, though not extensive.

The prisons are small, and in general healthy, excepting that on the point of the Linguella, which is washed by the waves of the gulf of Porto Ferrajo. All of them are without any infirmary. In New England, some employment is always given to prisoners, and they are kept separate during the hours of labour and of sleep. This practice, essentially connected with the interests of social order, and the laws of justice and humanity, is not yet known in the Isle of Elba.

The only lazaretto is at Porto Ferrajo. It is an insignificant structure, and stands at the entrance of the harbour. As it is extremely small, it requires a vigilant superintendence over strangers and seamen under quarantine. The Board of Health is very strict, and we must do it the justice to declare, that its severity is extended to itself in the same degree that it is exercised towards strangers. On account of a mere doubt I have seen its members submit to a rigorous quarantine.

CHAPTER III.

POLITICAL HISTORY.

THE origin of the first inhabitants of Italy and its islands is, and will long continue to be a subject of dispute among the learned. The works of Cato, Hieronymus, Ephorus, and Antiochus of Syracuse, are lost; and the authority of Dionysius, who quotes them, and supports his account with the permanent vestiges of the most ancient colonies, has been charged with imposture by Dr. Freret. It requires a transcendent genius to clear away the chaos of fables which embarrass the first steps of history, and a long series of authentic facts and monuments to justify and to prove the veracity of the circumstantial historian of Halicarnassus. This is not the object at which I aim: this victory is reserved for a French scholar with whose friendship I am honoured (*a*). All that I here propose to myself is a sketch of the particular history of the Isle of Elba. We know nothing of the Etruscans, except from a few

(*a*) M. Louis Petit-Radel, of the Institute.

fragments of the Greek and Latin historians. I have collected together what they have said respecting the island; I have searched the archives of the middle ages; I have read the Tuscan and Genoese writers; and it is only in consequence of the most minute inquiries that I have been enabled to fix a few epochs. I shall add a brief notice concerning the medals and vestiges of monuments found in this interesting island.

SECT. I.

Historical Sketch.

THREE centuries after the destruction of far-famed Ilium, about the time when Lycurgus dictated his laws to the Spartans, Italy contained several nations, or rather tribes, united together by a confederation which reminds us of the august tribunal of the Amphictyons. These nations were the Etruscans, the Sabines, the Latins, the Samnites, and the Brutii. None of them aspired to conquest. Engaged in the pursuits of agriculture, the inhabitants of the peaceful Saturnia enjoyed uninterrupted prosperity, attended with abundance and liberty.

The Etruscans, whom Hellanicus of Lesbos and Myrsilus (*b*) denominate also Pelasgians and

(*b*) Quoted by Dionys. Halic. lib. 1.

Tyrrhenians, were the most ancient possessors of the Isle of Elba. It was for some time under the dominion of the Phocæans who founded Marseilles. After their overthrow, it was under the special protection of the Lucumoni of Populonia; and while subject to them, it furnished the pious Æneas with assistance in men, to enable him to fight the valiant monarch of the Rutuli.

Elba was destined to have new masters. The power of Carthage, so feeble at first, increased with astonishing rapidity. Her dominion had passed the burning bounds of Africa; part of Sicily, almost the whole of Spain, and Sardinia, were subject to her laws. The ability of her commanders, and the number of her formidable fleets, soon rendered her mistress of the Mediterranean (*c*). Here she reigned for upwards of six hundred years. The people of Elba were likewise subject to her authority. It appears that they bore a part in the wars against Syracuse; for after the defeat of the Carthaginian navy, Phœlus was sent to the Isle of Elba to renew the scenes of carnage which made one vast tomb of the city of Trinacria, whose inhabitants were justly deemed the most valiant of the Sicilians. But that general, secretly bribed

(*c*) Polyb. lib. 1.

with money, retired without doing any injury. His disobedience soon became known; his exile was decreed; and Apelles, at the head of sixty triremes, reduced Corsica, ravaged the Isle of Elba with fire and sword, and carried off a great number of captives, together with all the booty that he could find (*d*).

Soon after this disastrous event, a new colony quitted Etruria to repeople the Isle of Elba, and to resume the working of its mines and quarries.

Already had the austere ambition and masculine courage of the Romans begun to disturb their neighbours; already did the most sanguinary contest cover Italy with heroes, and mark each day with a new battle. Three centuries were passed in this horrid state of convulsion. At length the Samnites and the Etruscans were overwhelmed and subdued; the whole of Italy passed under the yoke of the Roman eagle; every thing was changed, according to the expression of the poet:

Legge, moneta, e ufficio, e costume, (*e*)

and, with the liberty of nations, disappeared ter-

(*d*) In the 4th year of the 81st Olympiad. *Diodorus Sic.* lib. XI.

(*e*) Dante *Purg.* cant. VIII.

ritorial wealth, population, and prosperity: the arts and letters were annihilated.

The Romans, amid their conquests, conceived the plan of a universal monarchy. No sooner were they masters of all Italy, than they gained possession of Sicily also, and thence extended their conquests to the remotest regions of Africa and Asia. The haughty Carthage fell, after a long struggle; under the yoke of the conqueror. After her overthrow, no other nation was ashamed to be subdued: *post Carthaginem vinci neminem puduit*, and the whole world was the prize of victory.

The Isle of Elba meanwhile recovered its former splendor. During the second Punic war it furnished its contingent of men, and supplied the Roman consuls with all the iron necessary for the equipment of a fleet, and for repelling on land the conqueror of the Ticinus, Trebia, and Trasymene (*f*). It belongs to the number of the Roman colonies that saved the republic in this pressing emergency.

The extraordinary success of Rome extinguished her ancient virtues: the manners of her inhabitants became corrupted; superstition everywhere erected altars to the deities of Egypt;

(*f*) *Tit. Liv.* Decad. III. lib. 8.—*Sil. Ital.* lib. VIII. 612.

and Archagatus, the first physician that appeared in the republic, arrived from Peloponnesus (*g*). At length the descendants of the Cincinnati, the Camilli, and the Scipios, absorbed by luxury, avarice, and domestic broils, beheld the Forum stained with their blood, while Marius and Sylla lighted up the torch of discord, and inundated Italy with a deluge of calamities.

The partisans of the conqueror of the Cimbri and Teutones, compelled to flee from Rome, retired to the neighbouring provinces, whither they were pursued by Sylla. All the towns that afforded them an asylum were besieged, and given up to plunder (*h*). To this cause it was that Populonia owed its destruction. The Isle of Elba, which served as a retreat to such of the citizens as had escaped the sword of the

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(*g*) In the year of Rome 535. The healing art was still nothing but a mixture of quackery and hypotheses founded on the visible symptoms of diseases. It was Asclepiades who raised it at Rome to the rank of a science. Enlightened by the excellent works of Democritus and Epicurus, imbued with the profound doctrine of Hippocrates, he laid the ground-work of his medical system. His school was celebrated. It produced Themiston, the head of the Methodists, who divided diseases into three classes, according as they proceed from relaxation, obstruction, or a mixed state; and Galen, who brought medicine back to the principles of the sage of Coos.

(*h*) Flor. *Epitom.* lib. III. c. 21.

conqueror, became a theatre of carnage and devastation. From the boasted age of Augustus, which prepared one hundred years of ignorance, disgrace and barbarism, to the commencement of the ninth century, it was nothing but a place of exile and wretchedness (*i*).

The dominion of the Goths; the sanguinary wars with the Greeks, in which Belisarius and Narses occasioned the destruction of the greatest part of a nation, that, fifty years before, had struck terror into Constantinople; the arrival of those rude but courageous hosts, which issued from the recesses of Scandinavia (*k*), and for 206 years gloriously maintained their authority in Italy, from the Alps to the gates of Rome, led however, though but slowly, to the regeneration of ancient Ausonia.

Rome, Naples, Amalfi, Gaeta, and Venice, were already free; the Exarchate and Pentapolis alone were still subject to Liutprand, when the Popes invited Charlemagne to Italy. That prince arrived, defeated the Lombards, assumed the title of Patrician, and re-established the Empire of the West, which then comprehended the whole of Germany, France, and Italy.

(*i*) Ammirato *Istor. Fiorent.* lib. I.

(*k*) Paul Diacon. *de Gest. Lungobard.* lib. I. c. 2.

The brilliant reign of that monarch, who united the genius of the legislator with the talents of the soldier, was succeeded by the eighth and ninth centuries, the most disastrous in the history of the world, the parricidal wars of the Carlovingians, and the invasions of the Normans and Saracens. Anarchy became universal; wickedness and atrocity prolonged a state of barbarism, and Europe exhibited the prospect of one vast wilderness. At this deplorable juncture, Elba was suffering under the brutality of a military colony of African Moors, who had made themselves masters of Sicily, part of Magna Græcia, and all the islands in the Mediterranean.

The deposition of Charles the Gross was followed by 63 years of the wildest anarchy. The lords, who then held the thirty great fiefs or duchies created by the Lombards, contested the glory of giving law to Italy. They weakened one another, and the sanguinary war which they kindled was the signal of social disorganization. It was then that a foreign prince, a descendant of those ancient Germans who were the most cruel enemies of Rome—that Otho, surnamed the Great, rallied the discontented around his standard, fell upon Italy, and caused himself to be crowned King of the Lombards at Pavia, and Emperor of the West at Rome.

This disgraceful event (*l*) rekindled in the Italians all the energy of their character; it inflamed them with the desire of glory and independence. The voice of the country, so long stifled, was again heard; every hand grasped the sword; liberty sprung from her ashes, and the tenth century beheld a nation, replete with vigour, rising from decrepitude and the most abject degradation, and preparing, for two generations, the wonders of the republics of the middle ages.

Pisa and Genoa were the first cities on the Tyrrhenian sea that shook off the yoke. They adopted the consular government, and soon expanded the germs of that power which counterpoised the influence of Venice and Amalfi. Pisa, in particular, speedily became a flourishing state.

Pope John XVIII. invited the Catholic powers to deliver the Mediterranean from the tyranny of the Moors, and promised to reward them with the island of Sardinia. No sooner was this bull made public than the first maritime expeditions of the republic of Pisa were directed against the Saracens. She expelled them from the Isle of Elba, Corsica, and Sardinia, and drove them back to Spain and Africa (*m*).

(*l*) It happened A. D. 961.

(*m*) A. D. 1004 and 1005. Roncioni, *Stor. Pisan.* MS. lib. 2.

This success extended the commercial and political relations of the city of Pisa. Her renown increased in proportion; all the neighbouring states courted her alliance, and the Greeks of Calabria solicited her to put an end to the devastations of a colony of Moors which had settled in their country. The Pisans, eager after glory, immediately equipped a numerous fleet, and sailed for Magna Græcia, imprudently leaving their own city nearly defenceless.

Of this circumstance Muset, king of the Moors, who had reconquered Sardinia, received timely advice. Profiting by the improvidence of his enemies, he entered the Arno by night, plundered Pisa, burned the suburb, since called Chinzica, after its deliverer, and retired with a valuable booty (*n*).

Meanwhile the fleet sent to Calabria gained great advantages over the Saracens; completely defeating them under the walls of Reggio, and obliging them to hurry away in consternation to the desert plains, where once flourished Utica and Carthage.

On their return home, the Pisans were informed of the descent of the Corsairs, and the attack made by them on the very heart of the

(*n*) Tronci, *Annal. Pisan.* ad an. 1005.

republic. Under the simultaneous impulse of patriotic enthusiasm, they determined to revenge themselves on Muset. The signal was given, and the Pisans sailed for Sardinia, where his fleet then lay. At their approach, the pirate fled; they pursued, attacked him with fury, and their triumph was complete. The isles were cleared, and the shattered remains of the Moorish fleet sustained a second defeat on the shores of Africa. Bonn (*o*) fell into the hands of the republicans, and Muset was forced to sue for a dishonourable peace.

This new victory did not put a stop to the enterprizes of the Moors. The audacious Nazaredech, king of Majorca, cruized piratically in the Tyrrhenian sea, and struck terror into the inhabitants of the coasts of France and Italy. New dangers led to new triumphs. The generous pride of past success rekindled the general enthusiasm; all ran to arms, and betook themselves to their ships. The protection of Pisa was entrusted to the faithful Florentines (*p*), and the fleet set sail. It attacked the Corsair, defeated him, and, to render his ruin the more complete, chased him back to his own dominions. Here the Pisans besieged him for a

(*o*) The ancient Hippone, mentioned by St. Augustin.

(*p*) *Cronica* di Paolino di Piero, *ad ann.* 113.

whole year, till at length the Saracens yielded to their courage and perseverance. The Balearic islands were taken, Nazaredech killed, his successor made prisoner, and immense requisitions levied. Such were the results of that expedition *(q)*.

It was about this time that the possession of Elba, Corsica, and other adjacent islands, confirmed to the Pisan republic by Pope Gelasius II. excited the jealousy of the Genoese, who declared war against it *(r)*. After fourteen years of doubtful success, plunder, and conflagration, peace was concluded. Elba and the small contiguous islands remained to the Pisans, but Corsica was divided between the two states. The year 1133, which put an end to this disastrous war, was farther distinguished by the discovery of the Pandects, the destruction of Amalfi, and the origin of that long and dangerous struggle of the Italian republics in defence of their liberties against the ambitious projects of the Emperor of Germany.

(*q*) Laurentius Vernensis, *Pisan. in Maj.* poem. lib. 4. et seq.

(*r*) Caffaro, *Ann. Genuens.* lib. 1. *ad ann.* 1119.—Maragoni, *Cron. di Pisa*, p. 362.

No sooner had Frederic of Suabia ascended the throne of the Cæsars, than, considering the independence of Italy as a state of revolt, he engaged to re-establish the papal authority in Rome. Assembling a numerous army, he soon commenced his victorious career. He laid waste the Milanese, proceeded through Tuscany without encountering any resistance, and reduced Rome. All the cities courted his protection. Genoa in particular was highly favoured. He even undertook to terminate the dispute which had arisen between that republic and Pisa, on account of the colonies which both had established at Constantinople. But all at once the Lombard league repulsed Frederic's troops, and, by a manly resistance, compelled him, in the treaty of Constance, to acknowledge the liberty of the Italian republics, and to guarantee their existence.

Soon afterwards, the Patricians, men of restless and fickle minds, excited fresh troubles, and raised new dangers. They were filled with ambition, but their plans of aggrandizement involved them in ruin. The people rose, and Italy beheld the commencement of those atrocious dissensions which, for several centuries, prevailed between the parties of the Guelphs and Gibelines.

About 1192, Pisa being placed under the protection of the Emperor, was confirmed in the

possession of the islands of Elba, Corsica, Capraja, and Pianosa. Henry VI. erected them into a fief, which he granted for ever to the Pisans (*s*), who, from that time, never quitted the banners of the Gibelines.

Genoa was long rent by civil wars. To restore tranquillity it resolved to change the form of its government, to consign its interests to the hands of a foreign Podesta, to exclude its citizens from all offices in the state, and to make war upon its neighbours. This last was a dangerous expedient, but, as Cicero says (*t*), it was the only one that could extinguish the restless spirit of the factions which were incessantly springing up. Pisa was fixed upon. The possession of Elba, Corsica, and the other islands, was the new motive assigned for the war. Fired with hatred and jealousy by the flourishing condition and increasing power of the rival republic, the Genoese on this occasion neglected no means of giving a mortal blow to its commerce. Their agents raised up enemies against it in all the towns of Tuscany. At last, in conjunction with the people of Lucca, they equipped a powerful fleet, and destroyed that of the Pisans, near the rocks of Meloria (*u*).

(*s*) Muratori Ant. Ital. dissert. 50, p. 473.

(*t*) *Gravius esse tumultum quam bellum.* Philip. 8, n. 3.

(*u*) In August, 1284.

This day, so fatal for the republic of Pisa; this day, from which she dates her decline, did not satiate the wild fury of the Genoese (*x*): they vowed the total ruin of their adversary. A few months after, they gained over the Florentines to enter into their league. Count Ugolino della Gherardesca, immortalized by the sublime verses of Dante (*y*) refused to subscribe to it, notwithstanding the seducing offers which were made to him. In 1285, the port of Pisa sustained considerable damage from the attacks of the allied troops; in 1288, still greater evils were inflicted on it by the Tuscan Confederation; and, finally, in 1290, the Genoese recalled the exiled Guelphs, and succeeded in destroying it entirely, while one part of their fleet, commanded by Niccolò Boccanegra and Enrico de Masi, possessed itself of the Island of Elba. The Genoese gave it to the state of Lucca, reserving an annual tribute of 8,500 livres in gold (*z*), and a condition that they should retain the right of sovereignty.

They enjoyed it but two years. The celebrated Guido di Montefeltro being appointed

(*x*) Dal Borgo, tom 2, dissert. x, ann. Genuens, lib. 10.

(*y*) Inferno, canto 33.

(*z*) About 4200 pounds sterling, the golden livre being at that time worth a golden ducat, as is stated by Malevoti and Tommasi, Ist. di Siena.

captain-general of the Pisans, retook that important island, and secured its possession for a long time to the republic, by granting privileges to the inhabitants, and maintaining it in a continual state of defence.

While the restless and ambitious Gian Galeazzo Visconti, Duke of Milan, rendered himself formidable to all Italy, and kept the Tuscan republics in perpetual alarm, and while the plague desolated a great portion of Europe, Pietro Gambacorta governed the state of Pisa under the title of Protector of the People, and Chief of the Armies. Having the greatest confidence in Jacopo Vanni d'Appiano, whom he had just named Chancellor of the supreme Magistracy of the Ancients, he wished that in his capacity of Private Secretary, he should be entrusted with the direction of affairs of every description. Invested with a power so extensive, Appiano soon forgot the obligations he owed his benefactor (*a*). He secretly betrayed him; he

(*a*) Ammirato, lib. 16, Goro Dati, lib. 3, Poggio Braciolini, lib. 3, and other Florentine historians, partisans of the Guelphs, to render the action of Appiano still more criminal, have described him *a puero*, as if he had been by his benefactor, loco filii educatus. This assertion is false. From consulting the Archives of the town of Pisa, I have ascertained that there was but four years difference between the age of Gambacorta and that of his vile assassin.

laid a plan for giving up Pisa to the Duke of Milan, and thus aid him to realize his projects against Tuscany. On the other hand, the faction of the Raspanti pressingly solicited Appiano to recal the banished Gibelines, to destroy the Bergolina faction (*b*), to kill Gambacorta, and to assume the reins of the state, which should then be placed under the immediate protection of Visconti. This plan being arranged, they stirred up the people, and at the moment when Gambacorta was mounting his horse to proceed by his presence to quell the revolt, the infamous Appiano steeped his hands in the blood of his friend. Almost at the same instant he caused the two sons of Gambacorta to be put to death, and took the command of the Republic on the 21st of October, 1393 (*c*). He reigned five years, and died on the 4th of September, 1398 (*d*), leaving the succession to his youngest son, Gherardo. At the usurper's death, the Pisans claimed their liberty of his son. They renewed this demand several times, and at length Gherardo perceiving that the crowd of malcontents increased every day, and

(*b*) It was the party of the Guelphs, at the head of which was Gambacorta.

(*c*) Tronci, *Annal. Pisan*, p. 472 to 489.

(*d*) *Cronica di Pisa*, tom. 15, col. 1087. *Rerum Ital. script.*

fearing that he himself must be reduced to fly, or perish miserably, sold Pisa and its state (*e*) to the Duke of Milan for two hundred thousand florins of gold (*f*), reserving to himself as hereditary property, Piombino, Buriano, Scarlino, Sughereto, Follonica, Vignale, and their territories, as well as the Island of Elba, Pianosa, and Monte Cristo. This sale took place the 19th of February, 1399.

The change thus wrought, far from producing a happy revolution for the Island of Elba, occasioned it considerable losses. Injustice, every species of exaction, the burthen of the public charges, and, lastly, the calamity of the plague (*g*) afflicted and diminished its population. Its commerce was first shackled, then totally ruined; its agriculture neglected; the works of the mines directed by greedy hands, and the quarries of granite abandoned; every thing tended to augment the number of emigrations.

(*e*) It extended at that time from Porto Venere to Civita-Vecchia, and comprehended the Islands of Elba, Corsica, Sardinia, &c. (Vide Tronci, page 96, where he relates, among others, a diploma of the Emperor Frederic I. of the month of April, 1061.)

(*f*) Ammirato, lib. 16. Tronci, page 488.

(*g*) It took rise in the spring of the year 1400, extended over all Italy, and terminated with the winter of the following year. Scip. Ammirato, lib. 16.

Notwithstanding his pride, Gherardo d'Appiano could not dissemble his own weakness and insignificance. In 1403, he placed himself, and remained for many years under the protection of the Florentine Republic, then the most powerful of all Tuscany, and soon after constituted it by testament, the guardian of his son (*h*).

Jacopo II. having succeeded his father, formed a contract of perpetual alliance with the same Republic, as well in his own name as in that of all his male descendants. This act took place in the year 1419. In 1431, however, he revolted, united himself to the Duke of Milan, declared war against the Florentines, who were besieging Lucca, and took from them the forts of Montecerdi and Canneto (*i*).

The Florentines, enraged at this treason, retook the two forts, attacked Piombino, obtained possession of it, and kept it during eight years. In 1437, they defended the entrance of its port against the maritime force of the King of Naples, which they drove alike from the Island of Elba, from Pianosa, and from Monte Cristo. Three years after, they recalled Jacopo, restored his

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(*h*) The authentic acts are preserved in the Archive *della riformagioni* of Florence, years 1403, 1404, 1419, 1440, and 1450.

(*i*) Buonimsegni, Ist. Fior, p. 86. Ammirato, lib. 20, p. 1071.

states to him, and took him under their protection, exacting only an annual tribute in acknowledgment of their sovereignty, and reserving an absolute freedom in the ports of his dependency (*k*).

In 1450, Jacopo died without leaving children; his sister, Catarina, assumed the reins of government, and caused herself to be received, for ten years, as the Ally of the Florentine Republic. This convention was afterwards religiously renewed by her successors, when they took possession.

Although the situation of the Island of Elba was very critical, a still more disastrous epoch was preparing for it. This event commenced with the 16th century. Three princes, ambitious and courageous, reigned in Europe, and menaced it every day with the effects of their contentions. Charles V. who already governed Spain, the two Sicilies, Franche Comté, and the Low Countries, and was possessor of the treasures of America, entertained the design of invading France. Francis I. coveted Italy, and sought to unite it to his crown; and Soliman, that formidable warrior, who had just effected the submission of Syria, Mesopotamia, and Egypt, proposed to himself the conquest of Ger-

(*k*) Giero Capponi, Comm. tom. 18, col. 120. Rer. Ital. Script. Buoninsegni, Ist. Fior, p. 74.

many, perhaps even of all Europe, which he beheld distracted by civil and religious troubles.

I shall not follow the events of the war, which, during forty years, desolated both France and Austria, and which made Italy the theatre of hostilities and the tomb of the French; but shall content myself with detaching from it all which bears relation to the Island of Elba. This place became from that time an object in the views of aggrandizement of Cosmo de Medici, first Grand Duke of Tuscany, who, in the year 1537, possessed himself of the supreme power at Florence, and ranged himself under the banners of Charles V. who had recognised him as the sovereign of ancient Etruria.

Soliman, the ally of Francis I. in order to revenge himself for the splendid victory gained by the Emperor on the burning plains of Africa, sent a powerful squadron into the Mediterranean in 1541, under the command of Ariadene Barbarossa, who utterly defeated the fleet of Charles V. and carried desolation along the coast. This intelligence spread alarm through Italy. Cosmo, who understood how to palliate his usurpation in the eyes of the Tuscans, by flattering their taste for the arts and sciences, had the temerity to form a plan for despoiling his neighbours and allies of their rights. He proceeded in the execution of it gradually, and with great address. He profited by the terror which had seized on

all minds, to press on the Emperor the inability of Appiano, to resist for any length of time the courage and force of the Turks; he represented that weak and negligent Prince as unprovided with marine, men, necessaries, and money, and, finally, demanded to be charged with the task of defending his state. The Emperor consented; Cosmo transported troops to the Island of Elba, and repaired and placed a garrison in the fortifications of Piombino,.

A south-west wind prevented the enemy's fleet from entering the channel of Piombino. Barbarossa gained the Island of Elba, and came to anchor the first of July 1543, in the bay which bears at this day the name of Porto Ferrajo; whence, making sail for Marseilles, he proceeded, in concert with the French fleet, to lay siege to Nice. During their stay at the Island of Elba, the Turks gave up Capoliveri to pillage, and devastated the other villages of the island.

The Genoese, delivered from the immediate presence of the pirates, kept their eyes unceasingly open to the projects and political designs of the grand duke. They feared in him an enterprising rival, whose ambition might attempt to equal their power. They warmly opposed his taking possession of the Island of Elba, and the establishment of his marine both at Piombino and Pisa. It was not so much a regard for the interest

of the family of Appiano which actuated them, as the apprehension of seeing Cosmo vie with them for the coasting of the Italian shores, possess himself of the trade of the Levant, and soon become master of Corsica, which they daily alienated by their vexations and the most atrocious tyranny.

In the meanwhile, Barbarossa wintered at Toulon after the capture of Nice; and being dismissed by the French at the return of spring, he set sail for Constantinople. Finding himself in the Tuscan seas, he landed at the Island of Elba, committed fresh havoc there, and only quitted it to destroy the fort of Piombino, the island of Giglio, the towns of Talamone and Porto-Ercole, and to carry off a great number of prisoners. The resistance made by Cosmo prevented the Turkish fleet from taking Orbitello, and ravaging all the Maremmes, and compelled it to fly towards the kingdom of Naples (*l*).

It was after these events that Cosmo solicited as a recompence of the services he had rendered, the investiture of Piombino, of the Island of Elba, and other dependencies. The Emperor refused him; and recognised the legitimacy of the claims of Appiano, then reigning under the title of Jacopo V. The grand duke concealed

(*l*) Muratori, Annali d'Italia, anno 1544. Adriani, Stor. de Piomb. lib. 4.

the mortification he felt. He deferred his hopes to another period, continued a detachment of a hundred men in his pay in the castle of Piombino, and as the peace signed at Crespy, the eighteenth of September 1544, permitted him to form relations with the court of France, he sent ambassadors to Francis the First, by whom they were received.

Ambition never sleeps; she seizes with avidity the slightest circumstance which can favor her views. In 1546, Charles V. solicited a supply of money from his ally. Cosmo, a skilful politician, stifling all resentment, sent four hundred thousand crowns, and received in exchange the promise of the investiture of Piombino, and the possession of the Island of Elba, within nine months.

The Genoese made every exertion to prevent this engagement from taking effect, and offered considerable sums to the Emperor. But Jacopo V. dying during these transactions, his widow was unable to resist; the time fixed being expired, Charles V. ordered the grand duke to be put in possession of his new states by force, if requisite; which was accordingly executed on the twenty-second of June, 1548.

Piombino was at this time the center of the plots which were laying against Cosmo by the Pope, the emigrants of Florence, the malcontents of Italy, the Genoese, and the agents of

France, of whom the Strozzi were the chiefs.

Fresh resistance was every day made, and difficulties accumulated to render the taking possession more and more disagreeable, and to afford time to Jacopo VI. aged only seventeen years, to reach the Emperor, and protest against the injustice which deprived him of the inheritance of his fathers. His proceeding moved Charles V., and the grand duke found himself deprived of the Island of Elba and of Piombino on the 24th of June in the same year. He received in exchange the state of Sienna; and to indemnify him for the expences he had been at in fortifying Piombino, he obtained in the Island of Elba the privilege of building a town on the site where Porto Ferrajo now stands, with a surrounding territory of the extent of two miles in every direction (*m*).

From the year 1516, the inhabitants of Algiers, being threatened by the Spaniards, had recourse to the pirate Barbarossa. This celebrated man, who was first a common sailor, possessed himself of the kingdom, and of a considerable part of the ancient power of the Almohedes, and put himself under the protection of Soly-

(*m*) Galluzzi, Ist. di Toscana, Adriani, Stor. di Piombino.

man, whose admiral he became. His success attracted the attention of the bold, and as example easily seduces, a long period did not elapse before Abu-Ferez, governor of Tunis, made himself an independent prince, and Dragutt seized on the town of Tripoli(*n*),

The latter, a famous pirate, in a short time infested all the Mediterranean. The first flotilla, which he conducted himself, appeared in 1550. It consisted of forty-two sail, and was directed against the maritime coasts of southern Italy, which he devastated without pity.

In 1552, he ravaged the plains of Tuscany and the neighbouring islands; but it was more especially in the year 1553 that he made a descent on the Island of Elba. He anchored the 7th of August in the bay, near which Porto Lungone now stands; and during the ten days that he remained there, he took Capoliveri, Rio, Grassera(*o*), Marciana, Pomonte(*p*), and Sant' Ilario, carried the inhabitants into slavery, pillaged every thing, and burnt what he could not bring away. He attempted also to take Porto

(*n*) Hist. des Etats Barbaresques; Lacroix Hist. Ottomane.

(*o*) This little town existed on the spot at present called Santa Catarina.

(*p*) Situated opposite Pianosa, on the mountain which still preserves the name.

Ferrajo, but was vigorously repulsed with loss. The Island of Elba offering then nothing more which could feed his ferocity, he sailed for Corsica, which he replaced in the hands of the French; and in September returned into the Levant, laden with spoil and prisoners.

Two years afterwards Dragutt made a fresh descent on the Island of Elba, at the head of a fleet of sixty-eight galleys and twenty-five galliots. Every place was sacked, overthrown, and burnt; the villages, abandoned by the islanders, who had sought refuge at Porto Ferrajo, were devoured by the flames. While the pirate thus laid waste the interior of the island, a part of his vessels was commissioned to destroy all along the coasts. Never was there greater disorder, and the Island of Elba has not since recovered from the effects of this horrible desolation. The fleet staid fifteen days at the island, and steered thence towards Corsica (*q*).

Such was the situation of the Island of Elba under the reign of Jacopo VII. At his death, as he left no heir, the viceroy of Naples, in the name of the king of Spain, possessed himself of Piombino, the Island of Elba, Pianosa, and Monte-Cristo. Spain possessed the legal title to them, as the family of Appiano was allied by

(*q*) Ammirato, Ist. Fior. lib. 37.

blood to the ancient and illustrious house of Arragon (r).

One of the consequences of this change of dynasty, was that, to put an end to the incursions the pirates of Barbary, Philip III. ordered the construction of Lungone. This resolution, so tardily taken, favoured the repopulation of the Island of Elba, and from that time Pianosa alone became the theatre of the wars between the Elboise and the Turks.

About the commencement of the seventeenth century, the Island of Elba, together with the principality of Piombino, passed by donation into the hands of the house of Ludovisi of Bologna. Its reign was peaceful, and not distinguished by any remarkable event. The same was the case while governed by the Buoncompagni, who became possessors by alliance on the female side; but they only acquired in the island, Rio, Capoliveri, Campo, and Marciano, with their territories; the king of Naples reigning there, from the year 1735, as proprietor of Lungone, and the Grand Duke of Tuscany as sovereign of Porto Ferrajo.

At length the French revolution changed the

(r) In the Campo-Santo, at Pisa, I have found the proof of this assertion on the tomb of the Appiano family, and especially in the epitaph of Jacopo VI, who died the fifth day of the calends of March, 1567.

face of Europe. The grand duchy of Tuscany was destroyed, and by the treaty of Aranjuez, of the 21st of March 1801, it was, through the mediation of the court of Spain (*s*), erected into a kingdom in favour of Lewis I. infant of Spain, hereditary prince of Parma and Placentia.

The Island of Elba, entirely ceded by the king of Naples, then formed a part of the kingdom of Etruria, but a short time afterwards it passed under the French dominion.

SECT. II.

Antiquities and Monuments.

A LONG series of calamities, of wars, and of destruction, joined to the barbarous practice of defacing and overthrowing the most august monuments of antiquity to obtain the materials re-

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(*s*) It is curious to remark, that it was the court of Spain which warmly opposed, in 1560, the project conceived by pope Pius IV. of raising the Grand Duke of Tuscany to the regal dignity. Philip II. would not suffer in Italy any prince who might, by his dignities or his credit, equal his power, or simply pretend to deprive him of one of the numerous prerogatives which he enjoyed in that fine country. The Pope, who dreaded the opening of the Council of Trent, was fain to yield to the objections of his Catholic Majesty, and to do every thing rather than multiply the number of his adversaries.

quired for building, have successively deprived the Island of Elba of the edifices which the Etruscans had constructed there. Not a monument recals to the traveller any recollections of interest; not a ruin animates the landscape, and occupies the mind of him who would gather from it information respecting those distant times which tradition has consecrated. There still remain, however, some unequivocal proofs of the primitive splendor of the Island of Elba. I owe to the profound antiquarian, Luigi Lanzi, the knowledge of several of its medals (*t*).

From these precious monuments, which time has respected, and which chance has preserved from the fury of barbarians of every age, may be deduced the celebrity of the ports of the island, and the excellence of the anchorage. There is, perhaps, sufficient foundation to believe that the island was at first governed by its own laws, under the immediate protection of the Lucumoni (*u*) of Populonia. The privilege of coining seems to be a proof of this.

(*t*) He mentions some of them in his learned work entitled Saggio di Lingua Etrusca, tom. 2.

(*u*) Lucumo, says Lempriere, the first name of Tarquinius Priscus. The word is Etrurian, and signifies prince or chief.—*Translator.*

The most ancient medals (*x*) found in the island bear on one side a wheel with six spokes, and on the other an anchor with the letters A VI, VI, which easily represent the words Ilua, Ilva, if we consider the lower part of the anchor as forming the consonant V (*y*). I have remarked the same thing on the *as*, or Roman pence, contained in the rich museum of Bacci d'Arezzo. In 1801, during my stay at Rome, the Cardinal Zelada shewed me an uncia coming from the Island of Elba, on which were only seen the letters]I. Passeri (*z*) asserts, that the sign] is that which designates the semi or demi uncia; but it is more probable, as advanced by Gori (*a*), Guarnacci (*b*), Reynold (*c*), and Lanzi (*d*),

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(*x*) These medals are erroneously attributed to Lucera, a Samnite town, of which the manners, laws, language, and letters of the alphabet, were different from those of the Etruscans. (Pellegrini Disc. 4. *su la camp.* Lanzi, *loco citato,* tom. 2. p. 585 et seq.)

(*y*) This elision, if we may so express it, formed by a figure containing or replacing a suppressed letter, often occurs in medals. Froelich (Not. Elem. numism. p. 23) cites one of Archimedes, where the sphere which contains the letter χ completes the name formed by the letters ΑΡ. ΜΔ.

(*z*) De re numaria Etrusc. in paralipom. ad Dempsterum.

(*a*) Difesa dell' alfab. Etrusco, page 133.

(*b*) Orig. Italicke, tom. 2, p. 288.

(*c*) Hist. litter. cap. 15.

(*d*) Sag. di Lingua Etrusc. 2 parte, p. 214 and 268.

that it is equivalent to the U, and even to the V of the Romans.

The senator Filipo Buonarotti, of Florence, possessed two *as* of the Island of Elba, having on one side an anchor, and on the other a frog with the initials VI. Similar ones are seen in the Imperial Cabinet of Medals at Paris. In the Arigoni Museum at Venice, I remarked one on which are found the Etruscan letters IVS, written, it is true, contrary to the custom of the ancient Tuscans, from right to left, but which appears to me equally to belong to the Island of Elba; it styles its inhabitants (Ilvates, according to the ancient orthography) Ilvates, who must not be confounded with the people of Liguria spoken of by Livy (*e*).

In the Guarnacci Museum at Volterra is shewn a *triens*, on which there is a head armed with a helmet; and on the reverse the prow of a vessel, with the letters VI (*f*).

It was a received custom among the ancients to characterize by a particular type, by some symbolical trait relative to its foundation, manners, name, or history, the country to which the

(*e*) Hist. lib. 31. cap. 12, and lib. 32. cap. 29.

(*f*) It is through not having been observed with sufficient attention that this medal has been hitherto confounded with those of Talamone, on which the same type is seen with the letters VX.

medal they struck appertained. The knight-errant, armed with a spear, was the type of Spain; the wild boar, that of the Gauls; the palm-tree, that of the Phœnicians. Cardia, a town of Thrace, chose for its symbol a heart (Καρδία); Sidon, in Pamphylia, the pomegranate-tree (Σίδε); the island of Rhodes, a rose (Ῥόδον); Ægina, a goat (Αἴγινα).

If the anchor, of which Pliny attributes the invention to the people of Tyre, and the prow of the vessel, are considered as the particular types of the Island of Elba, they allude, no doubt, to the safety of its harbours, and to its naval victories. The frog, which the kings of Argos had taken for their symbol (*g*), recalled the fame of their ports, which received formerly the name of *Argos* (*h*).

As to the wheel, on the reverse of the medals of the Island of Elba, it cannot be considered as a particular type, since it is found on the medals of all the free Etruscan towns, as Clusium, formerly the terror of Rome; Luna, celebrated for its port; Cossa, which was abandoned by its inhabitants; Vetulonia, the scene of the glory of the Tuscans, &c.; and since it is remarked also on the medals of Lucera, (a town of Apulia,

(*g*) Mongez Dict. d'Antiquités.

(*h*) See Sect. I. of Chap. V.

which still exists) on those of Syracuse, etc. etc. It is only under this point of view that it deserves attention.

The wheel in the Egyptian mysteries was the emblem of the vicissitudes of life, and as such one of the symbols of Nemesis, according to Ammianus Marcellinus (*i*), it designates the power which extends itself over all the elements, and over the entire universe. Does it not represent, in the present instance, the curule chair on which the Lucumoni, the consuls, the senators, and the chief ediles appeared at the forum, and sat in the assemblies (*k*); the chair which Dionysius of Halicarnassus called ἐλεφάντινος θρόνος (*l*), after the Vetulonians had ornamented it with ivory (*m*)? And would it not in that case be the surest index that the Island of Elba had its particular magistrates, and that it enjoyed all the prerogatives of the towns to which the Romans accorded the title of municipal (*n*)?

It might also be thought that the Island of Elba, the colony or the ally of the luxurious Vetulonia, conceived it a duty to adopt the wheel, the particular symbol of its metropolis. Mar-

(*i*) Hist. lib. 14, cap. 11.

(*k*) Aulus Gellius, *Noct. Attic.* lib. 3, cap. 18.

(*l*) *Hist.* lib. 3. cap. 60.

(*m*) Silius Ital. *Bello Punico*, lib. viii. v. 485.

(*n*) Cicero, *pro Cluentio.*

seilles bore, like Phocia in Asia, the figure of Diana; Messina took the hare of Rheggio; and Tuder (at this day Todi) assumed for emblem the wolf in repose, the type of flourishing Hadria, its foundress, so vaunted for its exquisite wines.

A medal in the Oliverian Museum at Pesaro, seems to confirm this opinion; but on examining it, it is immediately perceived that a sensible and striking difference exists between the wheel of Vetulonia, of eight rays or spokes, and that of the Island of Elba, which has but six. It is therefore more probable that this medal commemorates the confederation of the two Lucumoni. This practice is not without example. On the medals of two towns of Lucania (*o*), Buxentum and Syrio, which latter afterwards took the name of Heraclea (*p*), on those of Selinus and Abacœnum, towns of Sicily (*q*), and on those of Sybaris and Pæstum (*r*), I remark the names of each of the two friendly nations.

However, it will be said, if we reflect on the situation of the Island of Elba, we have some

(*o*) Winkelmann, Arti del dis. lib. 3. cap. 1.

(*p*) *Cellarius*, tome 1, p. 726. *Geog. Antiq.*

(*q*) Paruta, *Medaglie Siciliane.*

(*r*) P. Paoli, *Antichita di Pesto.* pag. 58 et seq.

cause to be astonished at seeing it ranged under the protection of Vetulonia, whence, at the time of need, it could hope for no succours, δια τηϛ χωρας αλιμενου, *propter regionem importuosam*, according to the expression of Strabo (*s*), while Populonia, its neighbour, a frequented maritime port, and a still more powerful town, and which served besides as the principal vent for the produce of its mines, seems to be forgotten. This objection is done away by the example of the towns of Greece which I have just named, so far as regards Vetulonia. As to Populonia, its medals represent, almost universally, the head of Vulcan crowned with laurel; and on the other side, nails, a pair of pincers, and a hammer (*t*), doubtless to shew its daily relations of interest and friendship with the Island of Elba, whence it drew the greater part of the iron it wrought (*u*); and perhaps it was meant to characterize, by this double type, its union with the Elbaese.

Besides, in adopting the hypothesis of the alliance with Vetulonia, that with Populonia is not destroyed. All the republics dependent on Tuscany were united together for the prosperity

(*s*) Geog. lib. 5.

(*t*) Eckel, *Numi veteres anecdoti*, p. 18.

(*u*) Varro, cited by Servius, *in comm. Æneid* X, v. 172. Strabo, *loc. cit.*

of commerce, of agriculture, and the arts. Rome could not take umbrage at this. The terror of her arms forbade every idea of conspiracy. But enough on this subject: it is sufficient for me to have awakened the attention of antiquaries,

Alius alio plus invenire potest; nemo omnia (x).

At different periods there have been found in the Island of Elba, and particularly on the site now occupied by Porto Ferrajo, Latin inscriptions, medals of the emperors, some consular ones with the *triremis* and the *fasces*, struck in the names of Pompey, Cinna, &c.; sumptuous ruins of baths, and pieces of mosaic more or less uncouth. There only remains, if I may so express myself, the sad recollection of this second age of the prosperity of the Elbaese.

The ruins seen near the bay of Porto Ferrajo formed part of a Roman villa; the ivy, the wild vine, and the mastick, now cover its decayed walls. The eye discovers something picturesque in this mingled mass of active vegetation and slow destruction; the imagination contemplates it in an eloquent silence, while time proceeds in completing the work of the barbarians.

Vestiges of antiquity, but much less interesting,

(x) Ausonius, *Præfat. ad Idyl.* XI.

are also found at the Cape Della Vita (*y*), at Monte Giove, on the heights of Santa-Lucia, Pomonte, etc. On the summit of Monte-Castello is to be seen the ancient fortress *Il Volterrajo* (*z*), which is still maintained in a tolerable state. Its date appears to me about the close of the thirteenth century, and it has the reputation of having always successfully resisted the attacks of the Turks. Its circumference is very limited; it will hold a garrison of between four and five hundred men, and may be defended by a yet smaller number. It can only be reduced by famine. It contains some very fine cisterns, which are neglected.

(*y*) At the place called *il Palagio*, near San Bennato.

(*z*) It is also named Vetrajo. In the dark ages it should seem that this appellation was generally given to strong places; there are found in Italy, and especially in Tuscany, many places of retreat called *Mons Vultrajum*.

CHAPTER IV.

Geology.

Many physical revolutions, at periods more or less remote, have changed the face of the terrestrial globe. Rocks are every-where in a greater or less degree altered and decomposed; we every-where remark them piled up in disorder and confused, we every-where find masses of shells, innumerable marine substances, fossil remains of the largest species of animals, which are now either extinct or only to be met with at distances the most remote. This subject, so worthy of inquiry and reflection, has at all times occupied the attention of philosophers and men of science. Every one has erected a system for himself, and in so doing has departed from fundamental principles. Had it not been for the incalculable loss which the world has sustained in the works of authors who preceded the accurate Homer, we should have been more enlightened on the subject of the times anterior to the historical ages, and should have known that the deluge of Ogyges *(a)*, and the disastrous flood

(a) Supposed to have happened 1764 years before the Christian era. It is said to have inundated Attica, and to

of Deucalion *(b)*, were not the only partial convulsions which desolated our planet. Doubtless the great antiquity of Etna, of Mont Blanc, the most elevated peak of the Upper Alps, of Chimboroco, that Colossus distinguished among all the mountains of the world, might instruct us on the cause of this disorder of nature, but they are themselves too far removed from the first epochs of the world.

Hitherto the torch of physical inquiry has become dim before the darkness of the profound abyss. Soon will geological observations on every quarter of the earth, the comparison of results, and the spirit of critical analysis which now directs the investigations of the learned, resolve the grand problem of the revolution which has moulded our continents into their existing forms, and perhaps even assign the epoch of this mighty operation. I proceed to examine attentively the original constitution of the Isle of Elba, and to demonstrate, as clearly as I am able, that it is not of a volcanic nature.

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have rendered Bœotia uninhabitable for two hundred years.

(*b*) This deluge happened three hundred years after the preceding, united the Euxine to the Mediterranean, and drowned the sea-coasts of Asia Minor, Thrace, Greece, Egypt, and Lybia.

Disce, docendus adhuc quæ census amiculus; ut si
Cœcus iter monstrare velit; tamen adspice, si quid
Et nos, quod cures proprium fecisse loquamur (c).

Sect. I.

Physical Constitution of the Isle of Elba.

This interesting island affords many unequivocal indications of physical vicissitudes. On surveying it, we inquire: how has it been formed? Does it owe its existence to the action of fire, or to the agency of the waves? These questions are essentially connected with the theory of the earth, and their solution demands the exercise of genius far superior to mine; but while I acknowledge my incompetency, I proceed to hazard some application of the observations which I have made or collected.

Do we discover in the Isle of Elba any obvious traces of the local action of fire? Many substances which present themselves to the naturalist encourage this idea; but is it demonstrated? I answer, no; and shall endeavour to prove that I am well founded in this opinion.

Mica is considered to be a substance, the

(c) Hor. lib. 1. Epist. vii. 3.

composition of which arises solely from the mixture of volcanic salts; but is it certain that it is a compound of them? Mica is founded in different states in every species of soil: it belongs essentially to primordial earths; it is there that it is produced among the irregular crystallization by which rocks have been formed (*d*). The mica, which is scattered throughout the Isle of Elba, is found only in ground of a calcareous genus, in sand stone, in argillaceous rocks, in beds of schistus, and in sands of the latest formation.

It is thought that we ought also to refer the formation of serpentine (*e*), or at least, a considerable portion of its component materials to the action of volcanoes. It ought to be observed, that the serpentine of the Isle of Elba, examined with scrupulous attention, and analyzed with care, affords no characteristic which is distinctly volcanic, that is to say, it does not present in the mass of the same stone any of the crystals of schorls: these are the real steatites; the external character of this species of serpentine is a fawn-coloured schistus, lamellated and foliated.

(*d*) Hauy, Traité de Miner.

(*e*) A species of marble belonging to the class of primitive rocks, and so called from the figures of serpents or dragons which it displays. It is susceptible of a fine polish.

That which undoubtedly tends most to establish the existence of ancient subterraneous fires in the Isle of Elba, is the presence of granite, which prevails in abundance, and in great measure constitutes the numerous rocky shelves with which these coasts are bristled. Lehmann (*f*), and the celebrated Pallas (*g*), have shewn that granite is the principal component material of our globe, that it forms the central chain of the highest mountains (*h*), of mountains essentially primitive, *the giants of an inorganic world* (*i*); that it is found in the utmost depths to which human industry has been able to penetrate. According to the admirable observation of Dolomieu (*k*), it has never been the seat of volcanoes: conflagration generally ceases where this matter occurs. There are numerous sorts of granites, whether we consider them under the relations of texture or of colour, whether we take them as the produce of an aggregate of various substances united by means of water, and consolidated by a cement more or less binding, or whether, in fine, we view them

(*f*) Œuvres Physique.

(*g*) Dissertation on Granites.

(*h*) Such as the Alps, Pyrenees, Cordilleras, Caucasus, Mount Atlas, &c. &c.

(*i*) Hauy.

(*k*) Voyage aux Iles de Lipari.

as resulting from volcanic effects. The granites of Egypt generally composed of quartz, schorls, crystallized granite, mica, and feldspar, are volcanic productions. The granites of the Euganian mountains, according to the curious observations of the learned Arduino of Venice (*l*) corroborated by Spallanzani (*m*), have for their basis feldspar, contain brilliant sparks of hectagonal black mica, are attracted by the loadstone, and are volcanic productions. The granites of the Isle of Elba, on the contrary, are a combination of many different substances, united, conglobated, and cemented together by an aggregation altogether accidental, by a simultaneous crystallization resulting from the waters. These granites possess no magnetic property.

The seats of volcanoes, which can only be ascertained from the lava which they emit, reside in those furnaces where the fire modifies the matter of which they are formed. A profound lithologist, whose loss is irreparable (*n*), assures us that the chief productions of volcanoes belong to that class of stones which contain schorl in masses, horn-stone, and argillace-

(*l*) Raccolta di Memorie chemico-mineralogiche, metallurgiche, et orritografiche.

(*m*) Voyage dans les deux Siciles.

(*n*) Dolomieu.

ous schistus. The immense volcanoes of Peru, of Teneriff, of Etna, of Solfatara, and of Vesuvius, are situated in the midst of porphyric rocks, the genus of which is between horn-stone and petrosilex, which hold in union a great quantity of schorl, feldspar, greenish quartz, or chrysolites in rounded flints (*o*). In the Isle of Elba I have not discovered any kind of porphyry, or basaltes, or stones which contain olivine, augite, leucite, phonolite, or crystals of feldspar.

It is also to be added, that time and the nature of volcanoes are the continual sources of destruction. The contact of air and the acidous sulphuric vapours affect the superficies of volcanic mountains, and the dreadful chaos occasioned by the overwhelming force of the excessive heat to which they are exposed, is soon visible to the inquiring eye.

The extinct volcanoes of Puy-de-Dôme still present the matter produced by fire in a state sufficiently distinct to enable us to trace the three epochs necessary for the formation of lavas, of which, one order is of a date anterior to the irruption of the sea into Auvergne (*p*).

(*o*) Humboldt, Tour to South America; Cordier, Voyage to the Peak of Teneriffe; Sennabier, General Reflections on Volcanoes.

(*p*) Desmarest, Journal de Physique, 1779. Dolomieu.

I know also, that in the mineral kingdom there is a great number of substances, of which, the primitive matter has, at first sight, been a volcanic production, which, by a series of dilatation and condensation arising from the mechanical and chemical action of water, and by the intemperature of the atmosphere, have been broken in pieces and decomposed, previous to their entering again into other aggregates and other compositions. Such are basaltes and porphyry; such is also the lava of 1739, mentioned by Brydone (*q*), which had generated eight inches of earth;—feldspar which becomes friable (*r*), and light schoria which is converted into pozzolana (*s*). It is a general rule, that hard volcanic matter endures for so great a length of time, that it is impossible to assign any term for its decomposition (*t*).

Nothing proves the truth of what has been stated (*u*), that the Isle of Elba has undergone this atmospheric declension, and that the struc-

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(*q*) Brydone's Tour in Sicily.

(*r*) Spallanzani.

(*s*) Gioeni Littologia Vesuviana. Dolomieu is of a different opinion, and ranks pozzolana among the substances produced by the action of volcanoes.

(*t*) Spallanzani instances the lava of Arzo emitted in 1302, which still preserves its hardness and sterility.

(*u*) Tronsson Decoudray, Journal de Physique de 1774.

ture of all its mountains has been reversed by some grand explosion.

A learned foreigner, associate of the French Institute (*x*), has, nevertheless, shewn me many volcanic substances, which he assured me were brought from Elba. This direct assertion caused me to doubt that which I had myself seen; I returned to the island to renew my observations and researches, and the most diligent investigation only tended to confirm the opinions I had formed on preceding examination. The origin of these volcanic substances, if my friend has not been deceived, must be regarded as uncertain. Thus Dolomieu (*y*) rejects the morsel of volcanic glass picked up on Mount Etna, which does not produce pumice. I am not, it is true, ignorant "that there are volcanic products which are absolutely accidental, and which cannot be considered as the results of fire; such are the crystallizations formed in the vacancies of lava, zeolites, and chalcedony. Water, more or less, charged with fixed air, dissolves a greater or smaller quantity of clay; it is probable also that water produces this effect in process of time, by means of great heat" (*z*). But there

(*x*) Gio Fabbroni, of Florence.

(*y*) Catalogue Raigonée des Produits de l'Etna.

(*z*) Sennebier, loco citato.

are no pumice-stones in Elba which have not been rolled about by the waves of the sea, and which do not belong to the Eolian Isles (*a*), or even to Vesuvius.

Tronsson Decoudray, however, in order to prove that the Isle of Elba is volcanic, adduces the heaps of pyrites, which are so frequently met with at the mine of Rio, the sulphur discernible in the crevices, and the piles of that matter which he is disposed to denominate schoria; these, says he, vary in colour and consistency according to the nature and proportions of the substances which enter into their composition, and the degree of heat which they have endured.

If we investigate nature with unprejudiced eyes, it will be easy to destroy this argument. It is to the decomposition of marine vegetables, and to the decay of those which grow on the surface of the earth, that we owe the formation of pyrites and of sulphur, which are not produced by the operation of fire. The ferruginous dross, called schoria, is, in reality, spongy hæmatites; these afford no proof of the action of fire, because the pyrites which fill their cells, are composed of small particles, micacious

(*a*) The Lipari Islands, between Italy and Sicily.

and scaly, resembling the other hæmatites of the mine of Rio.

But further, there have been gathered in the Isle of Elba three pitch-stones, not volcanic. One of these was ash-coloured, and almost opaque; the second yellowish, and demi-transparent; the third opaque, and approaching to black. Submitted to experiment, they afforded no indication of fusion, and their analysis has proved that they held in combination a great proportion of silex, a less considerable quantity of alum, and a very little lime (*b*). This fact counterbalances the deduction from those substances alleged by Tronsson Decoudray and Fabbroni.

In resuming my observations, I demonstrate that the Isle of Elba does not, in reality, afford any fragment of lava, or any broken pieces of pumice-stone; neither vitrifactions, nor ashes, nor other matter produced by fire. Its mountains have not the shape of craters. In no part has lava been covered over, as in the most ancient exhausted volcanoes, with horizontal beds of chalk; throughout we perceive a primitive earth; the schistus of its mountains is not impregnated with bitumen, like those of volcanoes. From all these things, I conclude that this island

(*b*) Spallanzani.

is not the offspring of fire, that is to say, the result of the eruptive action of a local subterraneous furnace, like Procida, Lipari, Santorin, Ny-oas (*c*), and other Isles.

It is possible that the Isle of Elba, like that of Delos (where the ruins of a temple of Apollo are still to be seen) may have proceeded from whirlpools in the sea, and been elevated to its present level by an earthquake, or *par consenso*, a convulsive movement excited by the fermentation of inflammable substances, which have, in former times, been vomited forth from the bowels of Monte Rotundo (*d*), Monte Amiata, Radicofani, and other extinguished volcanoes on the coast of Etruria (*e*). By a similar process, I am persuaded, have the highest Pyrenees and Andes raised their heads to the clouds; it was thus, as we are told, that in the night of the 29th September, 1538, Monte-nuovo sprung up to the height of 180 feet, from the bottom of Lake Lucrin, so celebrated among the ancient Romans for the exquisite flavour of its green oysters (*f*), and still more recently a con-

(*c*) This Isle rose in the North Sea in 1784, as Santorin appeared in the Archipelago in 1637.

(*d*) An extinct volcano in Corsica.

(*e*) Vide the author's "Voyage en Italie."

(*f*) In 1726, a similar phenomenon occurred in Iceland.

siderable mountain, appeared suddenly between Malaga and Almeira (*g*). It was thus, but in an inverse sense, that on the 11th August, 1772, an immense mountain of the Isle of Java, sunk in a single instant; that in 1638, the city of St. Euphemia in la Pouille, was engulphed and replaced by a putrid lake, &c. &c. &c. The schisto-pyritous mountains of the Isle of Elba confirm me in this opinion. Upon these are frequently found the impressions of plants which satisfactorily establish their origin as the *deposita* of the ocean.

But might it not be still more agreeable to reason to suppose that this island once formed a part of the continent of Italy, and that it has been detached by the same shocks which in old times separated Sicily from the territory of Rheggio (*h*), the islands of the Archipelago from the Indian continent, and England from ancient Gaul; by those dreadful earthquakes which, aided by the currents of the sea, formed the Straits of Gibraltar, the Baltic Gulph, forced

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(*g*) September, 1804.

(*h*) This separation is very apparent. The soil on both sides is granitous, siliceous, and calcareous. Spallanzani has remarked, that the straits are every year diminished in extent by the junction of a stony substance with the rocks, and that Sicily and Italy will at some future period be reunited by this means at Cape Peloro.

their way through the Thracian Bosphorus, and will one day unite the Red Sea to the Mediterranean, &c.

According to the eloquent Buffon (*i*), before the epoch which poured the waters of the Euxine and of the ocean into the Mediterranean, this sea was nothing more than a lake of small extent, and the islands which adorn it a part of the land submerged in its waters. If, however, we examine the position and direction of the beds, their intermixture and relations of affinity and contiguity, it will speedily be seen, that on one side (the Isle of Elba), the rocks which constitute the beach are covered with an earth, reddish and vegetable, many feet in thickness, and furrowed with ferruginous veins, mingled with quartz, sometimes white and sometimes of a red colour, with schistus, argil, sand, and also greystone; it will further be remarked, that the strata of the mountains is perpendicular, or almost perpendicular; while on the other side (the coast of Populonia and Piombino), the earth is calcareous and replete with marine deposits, and was formerly rich in corn, oil, wine (*k*), and timber

(*i*) Theorie de la Terre et epoques de la nature.

(*k*) A proof of the prodigious vegetative power of this district is given by Pliny, in his account of the statue of Jupiter carved out of a single vine.

for building. The rocks present the same stones with which the walls of one of the most flourishing cities of ancient Etruria were constructed (*l*). A marble less beautiful than that of Carrara and the mountains of Sienna, is found here; mixed stones, veins of antimony and alum (*m*); iron, the bad quality of which offers no resemblance to that of Rio (*n*); and sometimes irregular beds of sand, of reddish earth, and of mixed iron ore.

Thus then the Isle of Elba is not volcanic, and never formed a part of the continent of Italy, notwithstanding its short distance from that coast. It has risen from the bottom of the sea. The absence of shells, and of other marine productions in the soil, cannot overturn this fact.

(*l*) Populonia.

(*m*) In the heights of Montieri and Massa di Maremma. the ancient alum works of Montione were justly celebrated, though they have been long abandoned. The fragments still found there, prove that they were far superior to those now in use.

(*n*) Mountains of Campiglia and Massa. Ferber (Lettre sur la Mineralogie d'Italie) thinks they are a continuation of those of Elba, which pass under the sea to the continent. Pini does not join in this hypothesis, and a comparison of the two islands and soils induces me to reject it as destitute of foundation.

SECT. II.

Mountains.

NATURALISTS who have visited Elba, do not coincide in opinion upon the nature of its mountains. One affirms that they are entirely granite (*o*), while another states that granite is not the substance which most abounds (*p*). A third only finds razor-stone (*Lapis Coticulares*), i. e. a very hard argillaceous schistus (*q*). These errors prove the defective method with which the observations have been conducted.

The mountains of the Isle of Elba are formed of three different nucleus, which are separated from each other by a valley which widens in proportion as it approaches the shore.

Monte-Castello is the central point of the eastern part; its ramifications towards the north embrace the odoriferous Monte-Grosso, Monte-Gairico, or Giove, covered with trees; and towards the south the wild and savage Monte-Arco.

Monte-Rorello is the focus of the central mountains, and Monte-della Capanna of those on

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(*o*) Ferber loco citato.

(*p*) Pini, lettore sull Isola dell' Elba.

(*q*) Decoudray loco citato.

the eastern side. These three masses are connected together by mountains of a secondary, and these again by those of a third order.

The mountains of the Isle of Elba, viewed separately, diversify its form and aspect. The whole together present only a mass of arid hills which fatigue the sense, and impart to the soul sensations of sorrow. Roads rugged and uneven, cottages deserted. Ruins scattered over the face of the country, wretched hamlets, two mean villages, and one fortress:—these, generally speaking, are all that meet the sight on the side of the island which extends along the channel of Piombino. The traveller, however, finds the scene changed on visiting Monte-Grosso, covered with myrtles, rosemary, the mastick tree, laurel-thyme, &c.; and Monte-Giove, where the green holm oak, cork tree, laurel, yew, and a small number of wild olives, afford an agreeable repose to the eye, and delight the imagination. The branches of the hills which stretch towards Lungone, present only naked rocks, without a soil to hide their barrenness, and almost destitute of verdure. At the Hermitage the landscape assumes an Ossianic character, which enchains the pensive and contemplative mind. In the centre of the island the hillocks are overspread with the cultivated olive, the useful mulberry, and the

enlivening vine; the Jujube (*r*) adorns them with its beautiful foliage; the Indian fig, and the cherry-tree (originally from Cerasunte in Asia), embellish them with their delicious fruits. On the west, the summits and declivities of the mountains consist of an unvarying granitous rock. Industry and toil render fertile the small quantity of earth which is collected at their base.

In order to form a correct idea of the anatomy of these mountains, and the internal composition of the island; in order to throw some light upon the nature of its soil, we must divide it into two irregular polygons.

The line should pass to the north of Porto Ferrajo, and terminate on the south with the point of Cape della Stella.

The eastern polygon comprehends Rio, Lungone, Capoliveri, and their dependencies; the western, Porto Ferrajo, Poggio, Marciana, Campo, and their respective territories.

Altogether destitute of metallic substances, the western division includes the most elevated mountains in the island (*s*), to which it is im-

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(*r*) A species of Italian prune, whose flower consists of several leaves, which are placed circularly, and expand in form of a rose.—*Translator.*

(*s*) It is scarcely possible to believe that Dietrich has ever visited Elba, since he states that Calamita is the highest in the island.

possible to deny the title of primitive, especially when we contemplate their height (*t*), and the granite which almost exclusively contributes to their formation. This stone is met at every step; it is that which constitutes the shelves wherewith the shores of the isle are bristled, and forms the essential basis of the soil of Marciano and Campo, and their environs. The houses are entirely built with it; with it are the streets paved, and the fields encumbered. The prevailing earth in this part is siliceous;—the presence of silex is universally apparent; it is the basis of all the stones which are to be found. Here it is also discovered (*u*) in the greatest abundance, and in the purest state, namely, under the form of rock crystal of considerable magnitude, slightly injured in its transparency, and sometimes united with, or founded upon quartz. Combined with alum and chalk (*x*), it produces a precious union, susceptible of the highest and most beautiful polish, such as is seen in the nu-

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(*t*) Not, it is true, equal to the height of the Alps, or highest peaks of the Apennines.

(*u*) At Monte-Prochio, Pomonte, Marciana, Campo, Acona, it is tinged with the sediment of vegetation (*crystalli muscosæ*); at Monte del Sasso, near Campo, and at Prochio, it is porous (*Armatæ*); at Marciana, Poggio, Monte-Penna, and Cape Sant Andrea, it is diaphonous (*pellucidæ.*)

(*x*) In all the territory of Campo.

merous varieties of calcedony, and above all, in that which they call *chachalong*.

At a short distance (*y*), united with potter's clay, and a calcareous earth, it affords some small determinate masses of gray agate.

The eastern part is of an entirely different aspect. Here we observe in several places (*z*) masses of quartz, of rock crystal, some granites, &c.; but earth of a silicious nature is very rare. That which predominates is an argillaceous schistus, sometimes calcareous, of a texture extremely brittle and light, and shining with particles of mica which are scattered over its surface. The mountains are not so high. They are chiefly composed of serpentine and oolite, and contain a great deal of iron. Aluminous mixtures abound in this part of the island, and are everywhere presented under different combinations, forming together, with flint, iron, chalk, or magnesia, binary and ternary, &c. compositions. A blue schistus, called slate, is also found in this region (*a*); but it is of so bad a quality, the tenuity of its particles is so weak, that it is impossible to apply it to any useful purpose.

(*y*) At Campo, near the sea.

(*z*) At La Cala della Grotta, the point of Capoliveri, and in all this district.

(*a*) Cape della Stella, Cape della Vita, Monte Castello.

Concerning the position of the strata of stone, Tronsson Decoudray says (*b*), that in the low and small mountains, the layers of argillaceous schistus are horizontal, but that at the summit of the highest they become perpendicular. He adds, that he had made a similar observation upon the loftiest mountains in Corsica, which often present these strata perpendicular or drawing together; sometimes converging like the ligneous filaments in the knots of trees. This perpendicular configuration of strata, joined to their undulating direction, renders it very difficult to ascertain the precise nature of mountains. It is owing to this, that the learned person to whom I have alluded could discover in Elba nothing but schistus in every degree of perfection and hardness, and does not mention the other substances which are to be found in a perfect state in many of the mountains.

The diversity in the position of the strata of schistus and other substances is evident. They generally incline, occasionally in one direction, occasionally in another, sometimes horizontally, and often perpendicularly. In many places (*c*),

(*b*) Loco Citato, page 53.

(*c*) At Monte del Sasso, adjacent to the ancient quarry of granite, near the grottos on the left, on the way to Porto Ferrajo, and along the sea shore from Capoliveri to Campo.

there is a very singular disposition of the ridges. They are united in perfect angles, in such a way that the angle is successively included within that which is next to it. This observation is derived from P. Pini. It has been confirmed by my own observation.

SECT. III.

Climate.

THE climate of Elba is temperate. The heats are neither excessive nor of long duration, and the cold weather is generally unattended with rigour. As in Italy, the autumn and winter are almost always rainy. During the latter season, the high mountains of Capanna are covered to their tops with snow for fifteen or twenty days. Here too the only intense cold is sometimes experienced.

The most severe cold in the memory of man was that commencing on the 14th of February, 1782. It froze during three successive days; all the *Agrumi (d)*, and a great number of the olive trees, were destroyed.

In the hottest periods of the year the sea

(d) Under this generic name the Italians comprehend oranges, lemons, and citrons.

breeze cools the atmosphere. The seasons usually succeed each other in the following order: a clear spring; a summer moderate, with nights cold and moist; an unsettled autumn; and a winter of short duration, but cold and rainy.

The air is generally salubrious; in some places great inconveniency is felt from winds from the south and south-east, which blow almost incessantly. The most insupportable is the fiery *Libeccio* (S. West), but it does not often occur, and seldom lasts long with violence, except at Poggio and Marciana. The month of April 1802, has been mentioned to me as a memorable epoch. The wind was so tempestuous, that on the 13th it overthrew even the most active men, and the laden asses which were exposed to its fury.

They never experience earthquakes at Elba.

Sect. IV.

Waters.

The Eolian Isles (where sails for vessels were invented (*e*), and where tempests are foreknown

(*e*) Diodorus Siculus, lib. 6.

many days previous to their occurrence (*f*), are destitute of springs; even the rain-water is absorbed by an ever-burning lava. Those who adhere to the opinion that Elba owes its existence to volcanoes, rely greatly on this fact, and discover exactly the consequence which they wish to deduce from the want of lakes and rivers in this island. It does not, however, want fountains, the waters of which are salubrious and agreeable; though the greater number, it must be confessed, become dry in summer. Many rivulets meander through it: the principal of which is that of Rio; whose source is in a delicious situation, a little below the village. Its waters are pure, exceedingly fresh, and abundant; they are spouted from six mouths into a basin which retains them. They increase and diminish with the daylight, and at the summer solstice, when other streams are generally low, the flow of this rivulet is most copious. I have often quenched my thirst, and always with new pleasure and enjoyment, at this delightful spring. The brook turns eighteen

(*f*) The ancients say, that Æolus predicted tempests. Dolomieu, in his Memoirs of Volcanic Mountains, has informed us, that this species of anticipation is common in the Lipari Islands, where they are enabled to predict the coming storms from the effect of the atmosphere on their volcanoes. Strombolo, in particular, by the frequency of its eruptions, announces many days beforehand the change of weather.

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mills, and after running a mile, is lost in the briny wave.

Unable to account for the origin of the waters and for their various courses upon the different beds of earth which constitutes a mountain recollecting that the water resulting from rains and the melting of snow is not sufficient to feed the rich source of the Rio, it has been contended that there is a communication, by means of submarine channels, between Elba and Corsica, or between Elba and the continent. This hypothesis is more specious than solid. Daily observation proves that water is raised into the atmosphere from all parts by evaporation, and that the exhalation from the sea deposits its salts in proportion as it yields to the attraction of the air. The dews and rains produced by this process descend upon the summits of mountains. These also fix the clouds, and act upon them from affinity. The waters are filtered through the earth which covers the mountains, and when they encounter any bed impermeable to them, they rise again to the surface(*g*). Thus is the rivulet of Rio nourished by the evaporation which is incessantly carried on in the atmosphere, and by the clouds which are arrested in

(*g*) Mariotti's Treatise on the Motion of Waters; De Saussure, Deluc, Monge, &c.

their course by the most exalted mountains of the Isle of Elba, and yield their moisture to the extent of their contact with them.

It is to the filtration of the water of this rivulet that a phenomenon, which strikes both strangers and the natives of the island with astonishment, must be attributed. On digging a hole to the depth of a few inches in the sand washed by the waves of the sea, soft water, and of the most agreeable taste, is drawn up. It has this peculiar property in common with the Rhine, the Tagus, the Po, the Danube, and other great rivers.

The Isle of Elba also possesses several mineral springs, of which I shall treat hereafter (*h*).

It contains some marshes, which it would be easy to cultivate by converting them into rice-fields. We know that one of the most remarkable epochs in the annals of the industry of South Carolina was that on which, in 1696, they introduced the culture of rice. Trees might also be planted; the oxygen gas, absorbed by the vegetable world, is metamorphosed and diffused in vital air through the atmosphere.

Hippocrates sent his sick patients to breathe the air of the isle of Crète, because it was charged with healthful emanations from the re-

(*h*) Vide Chap. 5.

sinous trees which grow there in great abundance.

The marshes of which I have spoken are produced by the impediment thrown in the way of the drainage of the water by the *traversier* winds (*i*) upon the coast, which impel the waves with violence towards the shore, fill up the wreck, and form a lasting bar at the mouths of the rivulets, and thus the ground wanting in steepness, the waters are forced to unite in the low situations, and there remain stagnant. It is by these means that water, that beneficial fluid, source of freshness and of life, when animated with motion, becomes speedily, in repose, the infectious laboratory of the mephitic poison, which, during three months of the year, renders Campo, Acona, and other plains in the island, uninhabitable.

(*i*) Cross winds which blow right up the mouths of harbours, &c. and accumulate the sands.

CHAPTER V.

TOPOGRAPHY.

HAVING taken a general and cursory view of the Island of Elba, I shall now, to give a more perfect idea of it, enter into some necessary details on each of the Cantons of which it is composed. I shall commence my topographical observations with its chief place, following in my progress the circular line of the island, in setting out from Porto Ferrajo, and continuing it by the east, south, and west.

SECT. I.

Porto Ferrajo.

THE spot upon which this city stands, is celebrated, according to the authority of Timæus, and other historians cited by Diodorus (*a*), for having served as an asylum to the Argonauts, when, after the acquisition of the Golden Fleece, they passed along the coasts of the Mediterranean. The ancients dedicated their hours of repose to certain great works. To refresh their

(*a*) *Bib. Hist.* lib. IV. cap. 17.

minds from the long fatigues they had undergone, those heroes built in this place the port which they called Argos (*b*), from the name of their vessel, and thence setting sail towards the famous walls of Aea (*c*), they proceeded to consult Circe.

This expedition (*d*) of the Argonauts, which the poets have so overcharged with fable, is generally regarded as a sport of imagination, notwithstanding the authority of Orpheus (*e*), who was of their company; of Homer (*f*), who founded his poems upon its history; of Hero-

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(*b*) Diodorus. *Bib. Hist.* lib. IV. p. 259. Apollonius Rhodius. *Argon.* lib. IV. v. 658. *Strabo*, lib. V. p. 224. The author of the book *de Mirabilium Auscultatione*, p. 882. Tzetzes, in *Lycophronem*, Nicephorus Callistus. *Hist. Eccl.* lib. VII. cap. 50.

(*c*) It was situated at the foot of Mount Circello. The city of the Volscians was built upon its ruins. The latter was taken by Coriolanus, and destroyed by Sylla, for being of the party of *Marius*. Some scattered remains of it are to be seen above San Felice, the only inhabited point of the mountain.

(*d*) It took place in the 3364th year of the Julian period, 1350 years before the vulgar era, according to M. Larcher, Chron. d'Herod.

(*e*) *Argonaut.* I am not ignorant that the author of this poem only dates from the time of Apollonius; but some learned Grecians think that it is but a translation of the Argonautica of Orpheus, who wrote in the Pelasgian language.

(*f*) Odyss. X. and XI.

dotus (*g*), who joined to the advantage of a vast erudition, that of having seen a great proportion of the countries which he described; of Onomacritus (*h*), and of so many other writers of whom we no longer know more than the names. I do not entirely concur in the sentence passed by the moderns; but if I here recal this extraordinary voyage, it is only to testify my desire of seeing the chronological bounds, which limit the periods of ancient history, removed farther back, and to prove that the beautiful bay of Porto Ferrajo has been known and frequented from time immemorial.

The Phocians being masters of Corsica, wished to plant a colony at this bay (*i*), but the Etruscans repelled them so effectually that they never re-appeared on these shores.

The Romans had an establishment at this place, as expressly stated by Diodorus of Sicily (*k*). The present city encloses its remains. It occupies the two hills upon which are constructed the forts of Stella and Falcone, which defend it on all sides. It extends along the Linguella, a

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(*g*) Lib. IV. cap. 179.

(*h*) *Orphei Arg. Hymni et de lapidibus. ed.* Eschenbach, 1589.

(*i*) *Seneca ad. Helv.* cap. 8, *Diodorus Sicul.* lib. V. cap. 12.

(*k*) *Bibliot. Hist.* lib. IV. p. 259.

neck of land stretching into the sea, and forms a harbour as safe as it is beautiful, and capable of receiving the largest vessels. The harbour is spacious and deep, but the entrance is dangerous when the south and south-west winds prevail. Its situation, its security, and its extent, render it very important. It affords a shelter to shipping from the tempests and waves of the open sea; and being in the neighbourhood of the Tuscan and Roman *Maremma*, it is supplied with abundance of wood for marine building. This advantage is incalculable.

It was in 1548, that Cosmo de Medici, first grand Duke of Tuscany, laid the foundations of the city, which he called Cosmopoli. A medal was struck to commemorate this event (*l*). Certain privileges granted to those who came to inhabit it, an exemption from imposts for several years, and full liberty given to commerce, greatly accelerated the population of this city, of which we might say with the poet;

Coronata da' monti in mezzo al marc.

(*l*) It presents on one side the head of the Grand Duke, with this inscription: *Cosmus. Med. Floren. et Senar. Dux;* on the other, a port, fortified by two castles, and enclosed by a chain, before which is Neptune; inscription, *Ilva resurgens Thuscorum et Ligurum securitate*; without date or name of the engraver.

The care of fortifying it was entrusted to the skilful engineer, Gio. Battista Belluzzi (*m*); whose genius, too little known, deserves to rank him with Vauban, Cormontaigne, and Cohorn. It can only be reduced by famine. The name of Cosmopoli was soon changed for that of Porto Ferrajo, which it now bears.

The houses are small, badly divided, without conveniences, built of brick, and generally but two stories high. The streets, which are wide, are in general terraces cut in the rock, all clean, and tolerably well paved. The city has two gates; one at the foot of the Stella is the entrance to the port; the other constructed on the side of the Falcone is a covered way. The interior of Porto Ferrajo contains nothing that can interest the heart or the understanding. Libertinism, and a degree of luxury, form there a contrast with the simple manners of the inhabitants of the island. It affords no society, no encouragement for the sciences and arts, no establishment for instruction, no public library, and I do not know of any private one. It has no monument worthy of notice.

(*m*) This great man, whom some call Camerini, was born at San Merino, the 17th September, 1506. He wrote on the art of fortification. Vasari gives an eulogium on him in his *Histoire des Peintres*. *Vide* also Galuzzi, Ist. di Toscana, lib. I. cap. 6.

Porto Ferrajo possesses within its walls neither fountains nor springs. Twenty-one cisterns, containing in the whole about twenty thousand barrels, collect the rain water.

The subterraneous magazines, as a granary for corn and other necessaries, are vast and constructed with great pains. In traversing them, I recalled to mind that the ancients were in the habit of heaping together their provisions in strong places threatened with a siege, not for one or two years, but for ten, and sometimes still more. Two reasons determined them to this, the fear of being deprived for a length of time of their communications, and the law, which they ever held inviolable, to surrender only at the last extremity, when their walls, tottering from the shocks of the battering ram and the crow, announced immediate ruin.

Since 1799, various advanced works have been constructed to add to the strength of Porto Ferrajo on the land side. The most considerable are the *Fort Anglais* and the redoubt of *Saint Cloud*. They are both placed on a height in front of the town, and are protected by two batteries, that of the *Point de Jour*, and that of Saint-Roch. It is in these hillocks, formed of calcareous deposits, that I have found incrustations of plants, and especially of *cryptogamia*. The stones taken from these hillocks are covered with a ferruginous mica,

which the waves of the sea transport from the shore at Rio, and throw on all the neighbouring coasts.

Farther on, at the place called *Lo Stagno*, there issues a fountain of a ferruginous, astringent quality, and tinged with an ochreous red. During winter it is covered by the waters of a marsh.

In an adjacent vineyard there was discovered a few years since leaden pipes, directed towards the town, for the purpose, no doubt, of conveying to it the delicious waters of the valley *Delle Tre-Acque*.

The bay is full of fish. I have caught in it the brilliant *labrus julis* of Linnæus, which the Italians call *donzellina*, from its elegant form and its skin, on which are painted the most lively colours; the *mullus barbatus*, that exquisite fish, which the Romans cooked on a little fire placed under glasses on their tables, that they might be gratified with observing the varied shades produced by the gradual change of its beautiful red hue; and the *pleuronictes solea* (the sole), the flavour of which is very delicate. Sometimes also the amphibious animal, known by the name of the *sea calf*, is caught there. This creature is about five feet long, the body reddish, with the head of a calf without ears, and with whiskers like a tiger. It feeds on fish and sea-weed; its cry a good deal resembles the

bellowing of a bull. It is of this animal that mythology has composed the herds of Neptune.

In 1713, a whale, about to perish from the effects of its deep wounds, was pursued from this bay to the coast of Tuscany, between Piombino and Populonia, and there killed (*n*).

The sea frequently deposits along the shores of the bay the *octopus nunchatus*; to which the Italians give the name of *muscardino*, on account of the strong odour of musk which it throws around. I have found it in the species of nautilus, which naturalists call *argonauta argo*. This handsome single-valved shell does not belong to the *muscardino*, which lodges itself in it by usurpation, like the insect called *cancer bernardus*, in other shells. The muscardino is the most formidable enemy of the Pinna marina. *Niccolo Partenio*, a celebrated Neapolitan poet, known under the name of *Giannettasio*, has sung their wars (*o*).

The population of Porto-Ferrajo amounts to about 3000 souls. It is, of the whole Island of Elba, the spot which is the most advantageously situated, either for war or for commerce. It commands a fertile valley, enlivened with country seats, and intersected by the fine road lead-

(*n*) Its *vertebræ* are preserved in the vestibule of the Botanical Garden at Pisa.

(*o*) *Halicutica*, cant. viii.

ing to Lungone, which is distant about five miles.

The lapidary may collect in the environs some granite, the green serpentine, considerable pieces of white quartz, rock crystal, and a clayey schistus of little consistency, which composes almost all the mountains of that district, and of which a much harder variety furnishes the razor stone. That which is procured on the shore near *Bagnai*, is distinguished for the fineness of its grain. Near the salt-pits some asbestos is found.

The plants of this canton are very numerous. The following are those which I have the more particularly remarked.

On the Sides of the Bay.

Salicornia fruticosa
Atriplex maritima
Pyrus communis
Euphorbia peplis
Juniperus sabina
Pistacia lentiscus
Euphorbia paralias
Bunias cakile
Crithmuns maritimun
Asphodelus ramosus
Ononis variegata

Val Delle Tre-Acque.

Olea europæa sylvestris
Sambucus nigra
Quercus ilex
——— robur
——— suber
Punica granatum
Rhamnus zizyphus
Fontinalis antipyretica
Tamarix Germanica
——— Gallica

Origanum Vulgare
Melittis melissophyllum
Prunella laciniata
Cystus helianthemum
Lycopodium helveticum.

Monte Santa Lucia, and Porto Ferrajo.

Hesperis maritima
Cistus incanus
Atriplex patula
Conyza squarrosa
Carduus nutans
Pteris aquilina
Ruta montana
—— Africana
Smyrnium perfoliatum
Pimpinella Saxifraga
Acer campestre
Buphthalmum spinosum
Hypnum triquetrum
Cornus mascula
Jungermannia complanata
Alisma plantago
Plumbago europæa
Thymus serpyllum
Myagrum rugosum
Arundo donax
Crocus sativus
Prasium majus
Trifolium glomeratum
Scabiosa arsensis
Erica arborea
Bromus sterilis.

In the Caves, and at Volterrajo.

Cactus opuntia
Pistacia lentiscus
Valentia muralis
Statice achioides
Plumbago europæa
Parietaria officinalis
Vitis vinifera sylvestris
Rosa canina
Chelidonium glaucium
Arplenium ceterach
Adiantum capillus veneris
Lichen crispus.

At Monte Rorello.

Ophioglossum vulgatum
Riccia glauca
Artemisia maritima
Bryum apocarpum
Lichen barbatus
Ophrys ovata.

SECT. II.

Rio and its Environs.

The town of Rio, situated on an eminence, is mean and poor. Its population may be about eighteen hundred souls. The environs offer some treasures to the lapidary, and an abundant harvest to the metallist.

The first will find there micaceous schiste, pyritous schiste, pyramidal triangular spar, a rock of green serpentine intersected by veins of white calx, vulgarly called *verd antique*, (*p*) quartz, some pudding stone, little susceptible it is true of a fine polish; and a rich quarry of white marble, veined with dark green (*q*).

The last will there discover that inexhaustible mine of iron, known and worked from time immemorial, which renders the Island of Elba so justly celebrated, and the metal of which, by the treaty of peace made by Porsenna with the Romans, after the expulsion of the kings, was no longer to be used but for purposes of agricul-

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(*p*) On an extent of two miles, that is to say, from Rio to the place called *Santa-Catarina*.

(*q*) At *Santa-Catarina*. The mountain of this name supplies the greater part of the other productions after mentioned.

ture (*r*). All the writers of antiquity, Greek (*s*) and Latin (*t*), speak of it with admiration. Virgil (*u*) calls it,

Insula, inexhaustis chalybum generosa metallis.

Silius Italicus (*x*), *Rutilius* (*y*) the Gaul, and *Theodoric* (*z*), sing the noble use which the Elbese made of this, the most necessary and precious of all metals.

An entire mountain, of the height of a hundred and ninety-four Florentine fathoms (*a*), bathed by the waves of the channel of Piombino, and situated near the little village of Marina, almost in front of the ancient port of Faleria (*b*), forms

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(*r*) Pliny, *Hist. Nat.* lib. XXXIV. cap. 14.

(*s*) *Strabo*, lib. II. *Ptolemæus*, lib. III. cap. 1. *Diodorus*, lib. V.

(*t*) *Pliny*, lib. XXXIV. *Varro* and *Pliny* the younger, cited by *Servius*.

(*u*) Æneid, lib. X. v. 174.

(*x*) *De Bello Punico*, lib. VIII. v. 614.

(*y*) *Itiner.* lib. I. v. 351.

(*z*) *Cassiodorus*. Lib. III. epist. 25, and lib. XII. epist. 5.

(*a*) About 500 French feet; the fathom calculated at one foot 9 inches 6 lines $\frac{154}{1000}$ French.

(*b*) This port was situated not far from Corsica (the *Lyncæus* of the ancients), at about a mile from the town of Piombino. It was formerly much frequented. At present its principal road is almost choked up by the frequent overflowings of the river, which circumstance renders its anchorage somewhat difficult. It is noticed in the maritime Itine-

the iron mine: *Mons totus ex ea materia*, says Pliny (*c*). There nature has profusely stored up the truly useful metal, that which sustains agriculture, makes the arts flourish, and allies itself to the most common uses of life. The mountain is distant almost a mile from the village, in the direction of the north-east, and about three miles in circumference. It is separated from those which surround it by a small shallow valley, in which are scattered shrubs, and a few wild olives.

The superficies of the mountain is covered with a reddish ferruginous earth, abounding in little shining scales of iron ore; this bed is many feet deep. There are found on it myrtles and mastick in full perfection, and some vine-trees which give a very pleasant musk wine. In some parts of it wheat is cultivated.

The mineral does not exist in detached bodies, nor even in veins. The whole mountain is metallic. It offers, in a primitive soil, masses of metal accumulated without any fixed order, without regular and continued beds, sometimes solitary, and more frequently approximating

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rary of *Antoninus*, and in that of *Rutilius*, who disembarked there at the time the inhabitants were celebrating the feast of *Osiris*.

(*c*) Lib. XXXIV. cap. 14, in speaking of a similar mountain existing in the country of the *Cantabrians*.

one to another. There is only found there the quantity of terreous substance strictly necessary to serve as a depositary for the masses. Iron presents itself in every known variety; green and black ore, slimy and sandy ore, crystallized ore, mica, manganese, hematite.

Sometimes the iron is found in a pyritous state, that is, united with sulphur, when it gives crystals of marcasite of great beauty (*d*); sometimes it is found in a state of oxidation more or less pure, and mixed with argillaceous substances, from which result, if the proportion of iron is not considerable, ochres of all shades (*e*), and when the mineral is in greater quantity (*f*), red, brown, and black hematites; but if the earthy substance scarcely exists at all, the ore then assumes a metallic aspect, and its weight differs little more than a seventh from that of forged iron.

The mine extends above a mile into the mountain. Since the discovery of saltpetre, the work proceeds under the open sky, as in marble quarries. The ancients, who made deep excavations in this mountain, opened with the pick-

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(*d*) They generally take a cubical form, and their colour greatly resembles gold.

(*e*) Yellow is the most common colour.

(*f*) Their form is sometimes mamillary, and sometimes they resemble stalactites and stalagmites.

axe winding galleries (*g*), a method highly wasteful, and still more prejudicial to the health of the workmen. The ore it supplies is pure, of the finest colour, very hard, and at the same time richer in metal, more fusible, more abundant, and more malleable, than any other known species. It equals in quality the ore of Sweden, Lapland, and Siberia, and gives 0,75 to 0,85 of excellent iron, from which a very good natural steel is obtained. It is therefore erroneously that a naturalist, as estimable for his private qualities as for his vast acquisitions, Haüy, to whom Mineralogy is so much indebted, calls it an ore (*h*), that is poor in metal. He has doubtless been deceived by ignorant founders in whose hands the ore produces only from 0,50 to 0,60, and perhaps too by the absence of the black earth which always accompanies the ore called, *oxidulé*. "The red dust obtained "from the ore of Rio by trituration, or by the "aid of the file, bespeaks a very advanced oxi-"dation; this mineral, he adds, is found to be "poor." Is this fact well verified? I leave it to mineralogists to decide, and pass on to details which make the mine better known.

(*g*) In 1750, one was discovered, according to *Tronsson Decoudray;* and in 1788 a second, of which *Spallanzani* speaks in a detailed manner, chap. 33. of his Travels in the Two Sicilies.

(*h*) Mineralogie, tom. IV. p. 40.

Importance is attached to only two species of the masses of ore furnished by the mine. The labourers call the one *ferrata*, and the other *lucciola*.

The former, for which its metallic appearance has obtained this name, presents itself under an aspect simply ochreous, and sometimes under the form of lime. It is exceedingly hard, heavy, and not affected by acids; the loadstone does not attract it, unless it has been burnt. It is a hematite of the colour of the ore of Cronsted. Its cavities are filled with crystals.

The other kind has received the denomination of *Lucciola*, from the brightness with which the little scales composing it shine: it is a micaceous ore, less hard, less heavy, and less rich than the *ferrata*, which is frequently found in a crumbled form. When this dust is united to particles of a quartz quality, it constitutes a sort of emery, but which has not, like that of Jersey and Guernsey, the hardness necessary for its employment in the arts. Both these varieties often reflect the prismatic colours in an agreeable manner.

The good iron ore is generally enveloped in a shallow bed of argillaceous earth, of the nature of the *schiste*, which abounds in the mountain. It is a white soil, called by the workmen *bianchetto;* occasionally it is red, yellow, light blue,

and liver-coloured. It contains a great quantity of oxide of steel, which gives a yellow or pale red colour, and hardens to the consistence of a true jasper.

This *matrix* is not the only one, although the most general. The mineral is found also sometimes in the red ferruginous earth which covers the mountain, and sometimes attached to rock crystal, to sulphur, to copper pyrites, and to other substances.

But the mineral which is the most interesting and the most considerable, that which more exclusively belongs to the Island of Elba, is the crystallized ore *(ferrum crystallisatum retractorium adhærens, Linn.)*. Its metallic qualities are attracted by a powerful loadstone, when they are reduced into particles. Its *matrix* is a rock of serpentine mixed with white calx. Its masses of crystal are one of the finest ornaments of mineralogical cabinets, and especially of that of Florence (*i*). The form of the crystallization greatly varies; but the most frequent is the dodecahedron, with triangular surfaces. It is sometimes, however, so confused, that it would be impossible to determine its angles. I have

(*i*) In my *Voyage d'Italie*, I gave a detailed description of this rich establishment.

seen single crystals, which weighed several hectogrammes (*k*). There are some which are lenticular, and some specular, with brilliant and polished facets; others are shaped like the comb of a cock, spires, pyramids, &c.; some are polygons, and pointed like diamonds; and some have the appearance of leaves or scales laid the one over the other. The size of these crystals is proportioned to that of the cavities which they fill. They have no determinate colour. "They have ordinarily the colour and the "brightness of polished steel; but they are "often tinted green, red, black, yellow, brown, "and violet, of all shades. Quartz sometimes "mingles itself with these metallic crystalliza- "tions, and adopts their colours. There are "some of these pieces which appear to be an "assemblage of all the precious stones, and "offer to the enchanted eye the appearance of "topazes, emeralds, rubies, diamonds, ame- "thysts, aqua-marinas, and sapphires, united "together (*l*)." This great diversity of rain-

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(*k*) The *hectogramme* is a French weight of a hundred grammes, the gramme being equal to about nineteen grains.

(*l*) Decoudray, *Memoire sur la Mine de fer cristalisé de l'Ile d'Elbe.*

bow reflections is remarked in zones and spots.

What are the constituent principles of the crystallized ore? Chemists do not agree on this point. *Tronsson Decoudray* (*m*) asserts, that it is mineralized by sulphur, because, he says, when it is acted on by fire, it emits an insupportable sulphureous smell. This opinion is combated by the observations of *Cramer*, *Krenger*, and *Bergmann*, on the different minerals which have been the subjects of their experiments. It proceeded doubtless from the circumstance, that the ore submitted to examination had not been separated from the pyrites, with which it is generally impregnated.

Lamétherie (*n*) thinks, on the contrary, that the crystallized ore owes that form to its union with carbonic acid. This opinion does not appear reasonable; for it is well known, that carbonic acid combined in certain proportions with the ore, forms sometimes rust, and sometimes the spar iron (*o*); which have no relation with that of the Island of Elba.

Pini (*p*) regards it as a simple martial lime;

(*m*) Consult the work last cited.

(*n*) In his notes to the Mineralogy of Bergmann.

(*o*) *Fer spathique.*

(*p*) Lettere Mineralogiche sull' Isola di Elba.

but the term lime having no precise signification, as it may be applied to many metallic combinations, and the assertion of this mineralogist not appearing besides to be founded on any experiment, does not assume the character of evidence, and the problem remains yet to be resolved.

Delarbre, however,(*q*) states, that the crystallized ore is also found in volcanic tracts, and particularly in those of Volvic, of the Puy-de-Dôme, and of the Golden Mountain. But those crystals, commonly lamellary, are then strongly attached to the partitions of the cavities, resulting from the cracks or openings of the lava. *Fleuriau de Bellevue* has collected some of these crystals on Stromboli, nearly 500 metres (*r*) above the level of the sea. They occupied the almost vertical clefts of the lava; and this naturalist remarked, that their largest surfaces directed themselves perpendicularly to the sides of the chasms.

Nature recognises but one organic law, that of affinities. The decomposition of water, of vegetables, of animals, and their combination with other homogeneous bodies, is what constitutes the harmony of all things. Too great a quantity of hydrogen gas produces earthquakes,

(*q*) Journal de Physique, Année 1786. tom. ii. p. 113.

(*r*) A new French measure, about 250 fathoms.

while its mixture with the atmospheric air brings on combustion, and occasions volcanoes. (*s*) It was necessary to set out from this point, to resolve the problem in question.

But the honour of making known with exactitude the nature of the crystallized ore, and of determining the mechanism of its formation, should be ascribed to my learned friend *Giovanni Fabbroni* (*t*).

Enlightened by the torch of pneumatic chemistry, he perceived, that on breaking the tubes of iron in a state of white heat and often filled with thick threads of iron spirally rolled, which he used for decomposing water, crystals were found in the interior, perfectly similar to those of the Island of Elba, decomposing afterwards the ore by the aid of water, the product was found in all respects analogous to the boasted iron of Rio; whence he concluded, that the crystallized ore is a very pure oxide, resulting from the combination of the metal with combustible matters, such as sulphur, &c. Experiments made with care proved to him further, that it was the same principle of oxygen which,

(*s*) *Haüy*, Miner. tom. iv. p. 48.

(*t*) It is to be regretted, that this learned Florentine has written nothing *ex professo* on this discovery.

by its various modes of combination with the ore of the Island of Elba, and by its proportions, produced the varied colours admired in it. It is thus are formed the crystals of feldspar, which are found in *phonolithe*, and generally all the masses of crystals existing in volcanoes, and in all pyritous craters (*u*).

Pliny the Younger, and Varro (*x*), Strabo (*y*), and Virgil (*z*) believed, that the iron of the Isle of Elba had the property of reproducing itself as fast as it was extracted from the mine. This idea inspired no doubt, by the quantity of mineral which was thence derived for several centuries, is destitute of all foundation. It is easy, as Dietrich writes (*a*), to explain this supposed reproduction, if we reflect, that the miners reject and heap up as refuse, almost all those portions of iron, which are not very pure. This refuse in time forms itself into one

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(*u*) At Rio, the pyrites are found in the mine, in various places, and in small quantity, sometimes in shreds of little bulk, sometimes in heaps, and without any regular direction.

(*x*) Quoted by Servius in his Commentaries on the Eneid.

(*y*) Lib. 2.

(*z*) Eneid.

(*a*) Notes sur les Lettres miner. d'Italie, de *Ferber*.

solid mass; the potent agency of nature carries off the heterogeneous parts, and adding the homogeneous, augments the principle of iron already existing, produces crystallization, and makes this refuse as rich as the mines from which it had been taken some ages before. *Cesalpin* (*b*) and Becker (*c*) assure us that this refuse is converted into mineral in the space of one hundred years. Tronsson Decoudray epeats the erroneous assertion concerning reproduction, and endeavours to get it accredited, by giving an account of two pick-axes found in 1772, in the mine of Rio, incrusted with mineral, and covered anew with the crystal of iron. Pini, Spallanzani (*d*), and other naturalists have also seen nails, a lamp, coins, stakes, and other articles enveloped in masses of iron, or more properly speaking, impregnated with the metallic fluid with which the fissures of the mine were filled anew. This mineral which has been carefully examined, does not offer the perfect combinations, nor the lively colours of the original masses; but only

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(*b*) De Metallicis Librites, Roma, 1596.

(*c*) Physica Subterranea.

(*d*) I might have mentioned myself also, but dare not after these great authorities.

an assemblage of small fragments of mineral and crystal reunited with the yellow ochre and the same red earth, which they throw out, and which, in time, becomes hard. These ancient implements, can, of course, only be met with in the earth which has long since been worked.

The iron of the Isle of Elba, which the workmen, armed with pick-axes and mallets, tear from the mine, by repeatedly striking the sides of the mountains, and which they occasionally detach by the aid of gunpowder, is carried, as I have already said, to the neighbouring coasts, there to be reduced to the state of forged iron. A hundred and twenty vessels of the Isle of Elba, of from forty to a hundred tons, are daily employed in this service.

The principal founderies are on the eastern coasts of Corsica, under the shade of beautiful chesnut trees. The mineral is there extracted in the Catalonian manner, which consists in heating that which they receive from the mine, reducing it into small pieces, and arranging the strata, bed by bed, of coal and mineral. They excite the fire by means of great bellows. After some hours, when all the coal is consumed, the fusion is operated, and the iron appears in one mass, ductile and malleable, which they can compress by the stroke of a hammer. By

the third operation the iron is purified. This simple and expeditious method of which Tronsson Decoudray has given the most interesting details, is adapted in the forges on the shores of Genoa. The production of iron would be increased by one-third, if these establishments were directed by men more versed in its scientific treatment.

It is above all in the founderies of the coasts of Tuscany, at Massa, at Accessa, at Fallonica, and at Cecina, that the art of the metal-worker is yet in its infancy. They there use furnaces twelve and eighteen feet in height, to prepare the iron of the Isle of Elba; though these expensive and complicated engines are now, and ought to be wholly reserved, for those mines which contain much heterogeneous matter susceptible of being converted into white iron. The furnace is supplied from above, and is kept up by a cylinder. The broken mineral is thrown in from time to time, and finds its way to the bottom through the coal. It collects itself below, where it is held in a liquid bath. Four or five hours afterward, they let it off into the moulds or shapes of ashes made to receive it. This mass is very brittle; when it is left to cool slowly, it crystallizes into octohedrals bedded on each other. They render it, afterward, ductile, by recasting and the application of hammers; it then passes again under the hammer to

be forged; at length, they reduce it into square or round bars, for the purposes of commerce.

In many parts of the mountain which produces iron in such abundance, there are fountains; some of which are soft, others mineral, acidulous, gaseous, hepatic and martial. I shall only speak of those of the mineral sort; they are very good in cases of hœmorrhages, and of derangement of the nervous system. The chief spring, situated at a place called Vigneria, is in the highest degree astringent. The source is not protected by any stone work, but takes its rise in a rock (of quartz) covered over, or rather united with a ferruginous ochre, lime, sulphur, and a continual dissolution of pyrites. It is transparent, lightly ochreous, without smell; the taste sharp, rough, and disagreeable. On the margin of its basin, it deposits a crust or light sediment of a dull red colour. It contains a sulphureous acid, and above all a great portion of sulphate of iron. The property which it possesses of taking a black colour, on receiving an infusion of the gall-nut evidently demonstrates the presence of this metallic salt. *Joseph Buzzecoli*, known by the name of *Philàlete Toscan*, has treated of those waters, in his work entitled: "Delle acque Minerali di Rio," published in 1777. Dr. Schæffer, of Ratisbon, has also analyzed them.

Besides the mine of Rio, this country indicates the presence of many other iron mines. There is one particularly noted at Cape Pero.

Among the plants which I have remarked in this district, I shall only enumerate the following:

AT MOUNT GROSSO AND GAIRIGO.

Quercus robur.
——— suber.
Ficus carica sylvestris.
Ceratonia siliqua.
Olea europœa sylvestris.
Myrthus communis.
Tamus communis.
Trisolium augustifolium.
Solanum nigrum.
Fumaria officinalis.
Erica scoparia
Rhamnus zizyphus.
Punica granatum.
Pistacia lentiscus.
Aira caryophyllea.
Scabiosa arvensis.
Vicia serratifolia.
Daphne guidium.
Ruta graveolens.
Spartium spinosum.

ON THE MOUNTAIN OF THE MINE.

Crithmum maritimum.
Gentiana maritima.
Pteris aquilina.
Vitis vinifera sylvestris.

ON THE SEA SHORE.

Agava americana
Pyrus communis sylvestris.
Chelidonium glaucium.
Juncus acutus.
Polygonum maritimum.
Arundo arenaria.
Inula pulicaria.

ON THE RUINS OF SAINTS CATHERINA AND BENNATO.

Lichen Roccella.
Valeriana calcitrapa.
Papaver rhœas.
Stipa pennata.
Laurus nobilis.

SECT. III.

Port Lungone.

THE foundation of this place is dated from May 8, 1596. It was built by Philip III. King of Spain. By its situation, elevated on a mountain, it commands both the sea and the land. It is in the form of a pentagon. Originally it was named Pimontel; Porto Beneventano, and now it is called Lungone, from the long shape of its port. Before the reunion of the Isle of Elba with France, it belonged to the king of the two Sicilies, who maintained a small garrison there. It was also the residence of the general commanding the Neapolitan Presidencies.

The fortifications are good. The place is difficult of access; the galleries extending for a considerable way round it, are skilfully executed. In going over the artificial mines, invented to facilitate the taking of places, now become their best means of defence since the siege of Comminges, by Landégésile, chief of the army of Goutran, King of Burgundy, I recalled to mind, that the French were the first who experienced the effects to be produced by gunpowder in mines. When Spain conquered Naples from the French, an Italian named

Francesco Giorgio, then at Naples in the capacity of an architect, offered to *Captain Peter, of Navarre*, General of the Spanish army, who pressed the besieged French, in their last entrenchments, to make him in a very short time master of the castle of Æuf. The proposition was accepted, the architect placed powder in the mines which he had prepared, and finished by blowing part of the fortress and garrison into the sea.

This city contains 1,500 inhabitants. At the foot of the mountain on which it is built, there is a little village called *La Marina;* the port of Lungone is there. It is formed by a narrow natural bay, and is protected by a strong fort, seated on a little hill advanced in front of the city. This port is little frequented, though it is of a good depth and well sheltered from several winds. Its inhabitants subsist principally by the fisheries and the wine trade. This is a favourite place of resort with the Lungonese. I never saw but one pretty woman there, and she was a foreigner.

The water at Lungone, and even at *La Marina* is brackish and muddy, and only to be found in bad wells. That which they use most, comes from an abundant and limpid fountain, which issues from a rock washed by the waves of the sea; it is situated a mile E. S. E. of the city. It is called the fountain of Barbarossa,

after the celebrated Algerine Corsair, who is said to have discovered it in 1544.

The environs of Lungone are very agreeable, and very fertile in grain, wine, oil, and fruit. I have seen aloes and the American agave there in flower.

In a delightful situation in the midst of stupendous rocks, whose sharp and rugged summits seem to pierce the clouds, at about the distance of two miles from the city, we find the charming hermitage of Monte Serrato. We pase to it through an alley of cypress trees. I have sometimes stopped in this picturesque place, where the fresh springs yield delicious water, and which seems fondly to mingle with the excellent wine which the hermit lavishes on all who visit him. This tranquil retreat enjoys a certain something of Ossian in it which I know not how to describe, which insensibly sooths us to meditation and delight; elevates the soul to sublime thoughts, and makes its inhabitants forget their pains and all the corroding cares of life. There all is calm, all well adapted to invite sensibility to pour forth its whole soul in boundless confidence; this were the Paraclete two lovers would desire. The wild magnificence of nature, agreeable solitude, a view which, extending from the fertile plain, is finally lost in the vast expanse of the ocean; murmurs sweetly prolonged, which fill the heart with numerous

ideas of long life; the concerts of the feathered songsters, an unclouded sun spreading light and life around, and a moon whose silver rays throwing the shadows of the trees on the neighbouring rocks, a long and fugitive train, produced a magical effect. Such is the hermitage of Monte Serrata.

"O Rus! quando te adspiciam? quandoque licebit.
Nunc veterum libris, nunc somno et inertibus horis licebit,
Ducere sollicitæ jucunda oblivia vitæ (e)?"

I could not leave this beautiful retreat without regret.

The lithological productions of this district belong particularly to the class of magnesian combinations. We find the greenish leopentine talc of different colours, in small fragments and very thin plates.

About the commencement of the year 1802, a considerable iron-mine was discovered a mile from Lungone, on the sea-shore, and at the foot of Mount Arco, in a place called Terra Nera, but the iron was found very inferior to that of Rio. The mineral there forms little hills, and constitutes for the space of six hundred paces, the eminences which skirt the shore. They ex-

(e) Horace, lib. 2, Sat. VI.

plored it for some time, but it was soon abandoned.

Besides the American agave which abounds in the environs of Lungone, there are the following plants:

IN THE PLAIN.

Quercus ilex.
Prunus spinosa.
——— cerasus.
Cactus opuntiæ.
Populus alba.
——— nigra.
Scabiosa integrifolia.
Osmunda regalis.
Arundo donax.
Salvia verbenaca.
Euphorbia cyparissias.
Cucumis anguria.
Myosotis palustris.
Œnanthe pimpinelloides.

AT MOUNT ARCO.

Digitalis lutea.
Caucalis grandiflora.
Lagurus ovatus.
Erica scoperia.
Salvia pratensis.
Cerastium alpinum.

AT MOUNT SERRATO.

Thymus serpillum.
Melissa officinalis.
Catananche cœrulea.
Jasminum officinale.
Cytisus triflorus.
Pistacia lentiscus.
Circæa minor.
Veronica scutellata.
——— montana.
Phalaris utriculata.
Bromus agrestis (*Allion.*)
Globularia vulgaris.
Sherardia muralis.
Convolvulus sepium.
Narcissus poëticus.
——— pseudonarcissus.
Hieracium incanum.

ON THE LITTORAL.

Arundo arenaria.
Prasium majus.
Passerina hirsuta.
Globularia alypum.
Coris monspeliensis.
Chelidonium glaucium.
Alisma plantago.
Rottbollia subulata. *(Nob.)*
Cineraria maritima.

SECT. IV.

Capo Liveri, and its District.

The Romans and the Pisans made the Cape on which this town is built, a place of privilege and freedom to debtors, to bankrupts, and to those condemned for various crimes. Hence its name was derived, Caput Liberum, of which its present name, Capo Liveri, is a corruption (*f*).

This origin furnishes the solution of a singular remark which has occurred to me. The Persians formerly entrusted children to a master, who were to be taught not to disguise the truth; on the contrary, it seems to have been the custom at Capo Liveri to teach them to lie with impunity. " Falsehood grows with them, and

(*f*.) Mercati Metallotheca, lib. 7, cap. 6, says erroneously, that the name is from Caput Ilvæ, corrupted into Capoliveri.

after children have once got their tongue into this habit, it is wonderful to observe how impossible it is to eradicate it." At Sparta, and in the country of the ancient Germans, a young man expert in the art of stealing, was held to merit esteem; at Capo Liveri, the person who enjoys the highest consideration, is he who is the greatest proficient in imposition. Good faith, which they honoured at Rome on particular altars, hardly ever presides over any convention at Capo Liveri. This evil, it appears, is not diminished by the numerous legal proceedings instituted. The justice of peace in this district, for twelve years during which he has exercised his functions, has not seen a single day without being called upon to decide on some of the ceaseless contests of the people. Totus ex fraude et mendacio compositus est (*g*). This reputation the inhabitants of Capo Liveri have enjoyed for some centuries. "They form and fashion themselves according to Montaigne (*h*) to falsehood, as to an exercise of honour."

Ridicule often corrects the wanderings of youth, the follies of fashion, and the erroneous

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(*g*) Cicero.

(*h*) Montaigne, Essais, liv. 1. cap. 9.

systems of modern philosophy; the obstinacy of prejudice will sometimes yield to the force of reason; passions the most furious have been checked by a view of the evils to which they are likely to lead; we could find means to instruct the ignorant, to civilize the savage, but what shall subdue unconquerable habit? The attractions of habit render vice more potent. Habit flatters the natural indolence of man, who always prefers his present interest to his remote welfare. "We call money, not only that which is issued by the royal authority, but that which is falsely put in circulation (*i*)." The Mingrelians are brought up to theft, and they derive their greatest glory from it. Peter the First could break and decimate the Strelitz himself without causing a murmur; but he twenty times risked the loss of his empire and his life by compelling the Muscovites to shave themselves, and shorten their robes. This popular instinct is founded on habit; it is for the skilful legislator to possess himself of the motive, and direct it usefully.

The cape on which Capo Liveri is built, is called Capo della Calamita, from the loadstone mine which it contains. At the point of this

(*i*) Montaigne.

cape, three miles from the village, there is a mountain entirely formed of this mineral. At the distance of about two miles, the earth becomes very ferruginous, and is thickly strewed with great masses of this matter, of which some are hematites, which vary in colour from black to a deepish red, and others belong to the micaceous and scaly species. These stones, long exposed to the inclemency of the weather and to the heat of the sun, having besides undergone the action of fire by the conflagration of the briars and mastick which they burn on this cape, will not attract the magnetic needle. They have lost their magnetic property by the destruction of the little hills which attached them to the mass. On the margin of the scarp of the sea, the path leading to which is difficult and fatiguing, we meet with more considerable fragments; some are fixed in the mountain, others, detached from it, have fallen to its base. Examined with attention, this mountain will be found to resemble that of Rio, especially on the side of the sea. The loadstone is not there found ranged in ridges: it is irregularly accumulated in large masses, as in Norway, in China, the Phillippine Islands, &c.

No person has explored this mine; and the inhabitants of Capo Liveri take great care to conceal the secret of the place whence they dig

the loadstone, which they sell very dear. Over the whole surface of this Cape vegetation is very scanty, and trees or shrubs are extremely rare.

This mine of loadstone was not known in *Pliny*'s time; he does not mention it in any passage of his Natural History (*k*). It appears that it was only discovered towards the middle of the seventeenth century. The first author who notices it, is *Audeber* (*l*), who visited Italy in 1654 and 1655. According to him, it was at that time very little known, and the loadstone which was taken from it, was sold as coming from India or Ethiopia. *Mercati* visited it a short time after the traveller of Rouen; and being possessed of greater information, he knew better how to examine it. He expected to discover that these stones pointing to the North had most power, that they were covered with little filaments attracted by the iron, and afterwards by the loadstone; the stones deprived of these filaments and turned towards another quarter, are, he says, much weaker. This fact does

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(*k*) Neither in *liv.* 34, *chap.* 14, where this Naturalist speaks of the iron mines of Elba, nor in *liv.* 36, *chap.* 16, where he treats of loadstone particularly.

(*l*) *Travels in Italy and Observations thereon*, 12° Paris, 1656, page 262.

not exactly appear. It has been observed, that pieces of loadstone, just dug out of the earth, have their poles placed in an inverse direction from the centre of Magnetism. From this we might suppose, with *Æpinus*, that it forms itself naturally in the mines, with *points consequens*, analogous to those which are sometimes remarked in the relations of iron, to which they have imparted the virtues of the loadstone, by the ordinary process. This appellation is given to contrary poles, which succeed each other in the same body, and which are disposed in such a manner, that the fluid (accumulated in some part of this body) acts afterwards so as to produce in another neighbouring part, a magnetism contrary to that of the space in which the accumulated fluid resides. The theory of the loadstone owes a great number of its laws to the experience of the celebrated *Columbus*.

Loadstone varies in richness and colour. That of Sweden and Siberia possesses much iron; but the magnetic power is not in proportion to the metal which it contains. Near Solikams-Kaia(*m*), is found greenish loadstone. That of the Island of Elba is of the best quality; it is of various colours: brown, black, and of the tint of iron,

(*m*) In Siberia.

mixed with a lead-blue. *Mercati* (*n*) mentions one of flesh colour as excellent. It is capable of attracting and supporting a very great weight of Iron. I have seen a loadstone of the size of a small apple, carry from twenty to thirty pounds; I possess one smaller than that, which carries twelve pounds. The most wonderful within my observation was one which I lost in my journey from Leghorn to Marseilles; it would carry eighty pounds. Large stones of regular proportion and of this power are very rarely met with.

In the neighbourhood of this mine is to be found a whitish substance, sometimes mixed with a blackish colour, or a red partaking of yellow. The natives of Elba improperly call it *calamita bianca* (white loadstone) either because it adheres strongly to the tongue, or because it is always found attached to the loadstone to which it serves, if I may so speak, as a covering.

When wetted, it turns to a pale red. It is the *Cimolia candida* of the ancients (*o*). To the magnetic powers hidden in this stone, has long been attributed the singular virtue which

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(*n*) *Metallotheca Vaticana*, lib. 7. cap. 16, p. 164. edit. Romæ 1719, in folio.

(*o*) Valerius Cordus, *in Dioscorid.* lib. 5. cap. 44, Mercati *Metallotheca Vatic.* lib. 1. cap. 13, p. 17.

the Greeks pretended existed in the hyppomanes (*p*).

It has been said, that the compass fails in doubling the *punto della Calamita*, and in passing before the mine of Rio. It has been even added, that navigators, deceived by this influence, sail as chance directs, except when they are assisted by the light of day. I was anxious to ascertain the truth of this assertion. After many experiments, I can attest, that the loadstone-mountain of Elba and the productive mine of Rio have not this wonderful property, even at the distance of a quarter of a mile.

I gathered on the Cape *della Calamita*, very beautiful marcassite stones of a gold and even of a silver colour.

Lithologic productions abound in this district. There is found an alabaster, which makes a lime more tenacious than the Roman pozzolane, or that of the Phlegrian fields; calcareous spath, whitish and greenish steatite, formed of fibres growing side by side; white marble, gray and yellowish asbestos, greenish serpentine, sometimes crossed

(*p*) Mercati, *loco citato*, p. 167.—*Buffon* has given curious details of all that respects the hyppomanes (*Nat. His.* vol. 4, p. 214, of the quarto edition), of which *Theocritus* erroneously makes a plant in his sublime poem of *Enchantment*, v. 43.

with white lines; and to a great extent, principally towards the sea, rocks of quartz and ootites of which vases are made that resist fire.

In a very deep grotto, by the sea shore, at the extremity of the point of the Cape, called *la Cala della Grotta*, may be seen rock crystal with vegetation (crystalli muscosæ) enveloped in its transparent mass, and a kind of *Pellucidæ* of prismatic hexagonal formation, and of a very rich water.

It was at the *punta della Calamita* that *Dolomieu* found the mineral substance, which has since been called *yénite* (*q*). The specimens which he collected in three different beds do not possess any crystalline form (*r*); and it was this circumstance, no doubt, that determined him to class it amongst the black *schorls*. *Romé de Lisle* also has crystals of *yénite*, and he classes them under the section of tin mines. *M. Lelèvre*, who has named and described this body, considers it as a new substance, (*s*). But the German mineralogists combat this opinion; and

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(*q*) *Yénite* is still found in the iron Mine of Rio. Its bed is a thick layer superimposed on a primitive quartz mingled with *talc*. I have also seen yénite in Siberia.

(*r*) I have seen these specimens in the collection of M. de Duc.

(*s*) Journal des Mines.

we always gain by such discussions. The result may throw more light on the classification of minerals, more precision into the language describing them, and more exactness as to where they are to be found. An error detected, an opinion learnedly examined, a fact well established, such is the march of science. These constitute the wonderful edifice of human knowledge; each generation improves certain portions of it; all successively extend its boundaries.

This district is almost without springs. The inhabitants catch the rain water in wells and cisterns. The population is about 1100 souls.

With respect to its vegetable productions, as I have already observed, their number is very small:

Genista germanica.
Amygdalus communis.
Pistacia lentiscus.
Trifolium officinarum.
Melilotus italica.
Rosmarinus officinalis.
Polygala vulgaris.
Avena sterilis.
Erica multiflora.
—— scoparia.
—— arborea.
Salvia officinalis.
Lonicera cœrulea.
Euphorbia spinosa.
Origanum vulgare.
Crambe maritima.
Adianthum capillus veneris.
Urtica pilulifera.
Ruta montana.
Cistus monspeliensis.
—— barbatus.
—— helianthemum.

SECT. V.

Campo, Sant'-Ilario and San-Pietro.

THE canton of *Campo* is divided into three districts, at small distances from each other: *Sant'-Ilario* and *San-Pietro* on elevated ground, and the *Marina di Campo* forming a very commodious bay, and terminated by a fine plain, susceptible of a productive cultivation. This plain is partially intersected with streams, and the remainder is a marsh which dries up in summer. Its exhalations make *Campo* almost a desert during that portion of the year.

It is now about sixty years, according to the reports of the old inhabitants, since the two first of these villages were built; and they were constructed under the verdant canopy of a thick forest, which extended itself to the Hill *di Fonza*, on which are still to be seen its majestic remains. *Sant'-Ilario* and *San-Pietro* are now open, and immense blocks of granite are every-where scattered over their surface.

The population of *Sant'-Ilario* is 600 souls; that of *San-Pietro* 900; and that of *Marina di Campo* 200.

This canton possesses many springs and streams of water, clear and pleasant to drink.

There is found also white and grey asbestos, the filaments of which, running parallel, are shorter, less brilliant, and less flexible than those of this singular stone which is discovered in Corsica. There is also rock crystal, white clayey sand, containing little brilliant grains of yellow *mica*, greenish serpentine, white veined marble, very fine chalcedony of a milky white and blue tint, susceptible of fine polish, and little masses of cachiolong, the transparency of which is much clouded, and of a whitish appearance.

From Capo Liveri, and comprehending a great part of the canton of Campo, the mountains are composed of white *quartz* of *ootite*, and of immense chalky banks.

Here the lithologist may find abundance of the finest granite, that which is of so much hardness and of such fineness of grain as to render it susceptible of the most perfect polish, is got at places called *La Piaggia de' Cavoli* and *al Secchetto*, three miles from Campo. It was there that the Romans wrought parts of those grand columns, immense basins, and large vases, which decorated the museums, the public buildings, and the most precious monuments. It was there that the Pisans obtained the ornaments of their republic and of their temples. There lie prostrate numberless capitals and bases of pillars, altars, urns, and columns, hidden under the thousand twisted branches of mastick, rosemary,

and heath. Among those monuments which are begun and have been left unfinished, I particularly noticed three bases of enormous columns of the Doric order, of twenty-five feet in length, on one of which the trembling hand of an exiled Gibeline had traced these words—*Opera Pisan;* which displays the noble love of country, or the secret admiration of human genius, which jealous time slowly destroys. Higher up I found a great vase which the Elboise called the *Nave:* it is now the basin of a fountain. The work is only rough hewn, nevertheless the eye can discover the whole design, which appeared to me to be as elegant as it was correct.

In examining with care the places on which these proofs of the industry of men, who are now no more, remain; in measuring the height of the mountains, and the distance over which those enormous masses of granite had to be carried before they could arrive whole at the water side; in sounding the coast, which is so very shallow and sandy, and which must be passed before those masses could reach the vessels to transport them hence; in beholding the physical impossibility of availing themselves of the waters which roll irregularly over the most elevated summits, the mind is lost in astonishment, in attempting to imagine the power of the levers which must have been employed to accomplish the work. I confess that this thought filled me

with wonder; what power man exercises over all that surrounds him! what grandeur is there in the undertakings of the ancients! The Romans and the republics of the middle age were indebted for the power of their arms to their gymnastic institutions; those amusements which reduced to principles the art of carrying enormous loads, of striking with accuracy, of taking the best attitude to act with the greatest force upon any body whatever, whether it be in dragging or pushing, in raising or in lowering. The artists owed the magnificence of their works to the simplicity of the laws on which they proceeded, and to the nature of the institutions, all of which tended to the grand and the sublime.

Nothing is more surprising than the Cyclopian construction (*t*), the Etruscan walls, and the

(*t*) This important discovery for ancient history, of which it reduces the boundaries, at the same time that it fixes our ideas of the eras, which the absence of chronology induced us to call heroic or fabulous, is due to *M. Jean Louis Petit-Radel*, member of the Institute. The learned wait with impatience for the publication of a didactic work on this new branch of archaiology. I found and have sketched many monuments of this kind in Italy, among which many were still unknown; such as, for example, the walls of Amélia, of Spoletto, Gubbio, Todi, Archippe, of Ordeonia, Equatia, of the port of Canusium (now called *Barletta*), Cossa,

subterraneous aqueducts which conduct the waters of Lake Albano into the sea. These were not, as has been said, the works of a nation of slaves reduced by their laws to a state of perpetual servitude, and condemned to the hardest labours. These eternal monuments of the power and the genius of liberty will command the admiration of all ages; while the canal dug in the reign of the weak CLAUDIUS, to discharge the waters of the Fucine Lake into the Liris (now the *Garigliano*) (*u*); and the reservoir which the ferocious *Nero* built, extending from Cape *Misene* to the gloomy shores of Avernus (*x*) exist no longer but in the pages of history. The first was the work of nineteen thousand criminals condemned to die; the second was bathed with the tears of prisoners taken in war (*y*), and of citizens of distinguished families (*z*).

When the arts are inspired by genius, their enthusiasm is noble, their thoughts grand, and

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&c. I propose to publish picturesque views of them in my *Travels in Italy*.

(*u*) Tacitus, *Ann.* lib. 12, cap. 55. *Pliny*, Hist. lib. 36. cap. 15. *Suetonius, in Claud.* cap. 20 and 32.

(*x*) *Suetonius, in Ner.* cap. 31.

(*y*) *Tarquin* was the first that condemned prisoners of war to the public works. See *Suidas*.

(*z*) *Honesti ordinis*, says *Suetonius in Calig.* cap. 27.

taste is their most faithful guide. When to this sublime feeling succeeds presumption, tormenting caprice, tyrannizing fashion, and the ridiculous display of a vain luxury which would destroy entire countries, then the arts no longer exist. The first era recalls to the mind the astonishing perfection attained by the Greeks, whilst the latter pourtrays the ages of lower empire and the times of barbarism.

The granite which is trodden under foot round Campo, charms the eye by the variety of its colours. It contains *tourmalines*, black, yellow, and rose-coloured, in equal proportions; white and transparent emeralds; black and green schorls, which must not be confounded with those rectangular or parallelopiped bodies which the Swedes call *trapp*, and the lithologists schorls in mass, which are produced by fire; and there are masses of violet schorl which produce a beautiful granite. The Florentines extracted from the ancient quarry the superb block of violet granite which forms the pedestal of the fine equestrian statue of *Ferdinand I.*, the third Grand-Duke of Tuscany (*a*), as well as that which forms the entablature and the bases of the

(*a*) This monument, the work of *Giovanni Bologna*, is to be seen on the place *dell' Annunziata*.

rich chapel of *San Lorenzo* (*b*). The crystals of the violet schorl are in large cubes, in rhombs, and even in trihedral pyramids. *Schreiber* discovered rhomboidal crystals of schorl under the balm of Aunis at the foot of the high Alps. *Picot La Peyrouse* found them in the Pyrenees, at the peak of Eres-Lids, near Barreges.

Granite, as is the case in all primitive rocks (*b*), is here arranged in shelves, in a disposition which assumes every direction and every situation between the vertical and the horizontal. The water-falls, the continual washing away of the soil by rain water, and the currents which descend from these mountains, enable us to examine the sides of the granite, and to discover this arrangement more clearly. Let those come here who suppose the Island of Elba to be volcanic. As in the chain of the Alps, from Mount Baldo, near Verona, to the summits of Jura, nature displays the granite pure, and without the least vestige of fire. These shelves do not alternate, and are not confounded with volcanic substances, like the granite of the Vosges and the Apennines. Let them examine the mountains, their excavated sides, and even the foundations of the island, they will not meet with any trace of

(*b*) This is the place of sepulchre for the grand dukes. See my *Travels in Italy*.

(*c*) *De Saussure's* Travels among the Alps.

that hornstone (*d*), called *basaltes* by the ancients, which the observations of the learned *De Saussure* and *Spallanzani* discovered to embrace the active elements of all the volcanic phenomena. Those are not hypotheses, however brilliant they may be, which throw true light on the history of the revolutions of the globe, so interesting and yet so constantly obscured. We must behold nature, burst the barriers raised by the spirit of speculation, or bigotted adherence to existing creeds, and springing forward, conquer its vast dominion. Nothing then resists the triumphant efforts of genius.

On the flat shore of Acona, among the stones, left on the sand by the sea, I collected some chalky pebbles in which the waters had deposited tufts of amianthus and small branches of maiden-hair. They are fixed together.

The botanist may find in the neighbourhood of Campo the following plants:

Quercus suber.	Fagus castanea.
Ilex aquifolium.	Cytisus sessilifolius.

(*d*) This denomination, taken from I know not what account, of the horns of animals, appears to me defective. That which the ancient naturalists gave to it, is undoubtedly now applicable to certain productions of volcanoes. It is perhaps to be desired that it should be named *volcanic rock*.

Citisus spinosus.
——— laburnum.
Ceratonia siliqua.
Gentiana lutea.
Saponaria officinalis.
Vinca major.
Vinca minor.
Rosmarinus officinalis.
Ulex europæus.
Mercurialis commune.
Achillæ ageratum.
Melissa grandiflora.
Lapsana communis.
Hedysarum coronarium.
Coronilla communis.
Coris monspeliensis.
Monotropa hypopithys.
Prunus cerasus.
Globularia alypum.
Scrophularia vernalis.
Tamarix gallica.
Osyris alba.
Quercus ilex.
Thymus serpillum.
——— Vulgaris.
Cactus opuntiæ.
Punica granatum.
Arundo donax.
Genista tinctoria.
Cyclamen europæum.
Smilex aspera.
Valeriana cornucopiæ
Pistachia lentiscus.
Mespilus pyracantha.
Rosa canina.
Rosa rubiginosa.
Hieracium murorum.
Pimpinella saxifraga.
Juniperus sabina.
Lychnis dioica.
Lonicera caprifolium.
Olea europæa.
Convolvulus althaeoides.
Rhamnus paliurus.
Ficus carica.
Borrago officinalis.
Echium vulgare.
——— italicum.
Cynoglossum officin. (*e*)

(*e*) This plant, commonly known in Italy under the name of *lingua di cane*, is the remedy applied to dogs to cure the sting of a viper. The physician, *Niccolo Baratta*, of Castrovillari, in Calabria Citerior, used it, under my observation, with success, to cure persons stung by this venomous reptile. He sometimes used the plant pulverized and applied to the wound, and sometimes in drink strained in wine.

Sect. VI.

Marciana, and its District.

On quitting the territory of Campo, the traveller arrives at the summit of the mountain *Della Capanna*, the most elevated point of the Island of Elba. Thence the eye wanders over Corsica, taking in the cape which is so fertile in delicious wines, and to which *Seneca* was exiled; the little town of Bastia, with its port; the ruins of Mariana, bathed by the waters of the gulph of Churlino, abounding in fish; the Golo, which descends in cascade after cascade from the ancient crater of Monte Rotondo, the central point of Corsica, and wanders over Furmorbo, the immense plains of which produce a profuse vegetation. To the east he will discover that vast extent of country known under the name of the Tuscan *Maremmes*, which was in former times the theatre of the arts, and the abode of abundance, but it is in our days destitute of inhabitants, in consequence of the unwholesome air which is there breathed. The view extends itself over every part of the sea,

the neighbouring islands, and is lost on one side in looking towards the site on which Rome is built (*f*); on the other, we discover Leghorn (*g*), the general entrepot of the commerce of the Levant; the Apennines peopled even to their summit, and the vaporous mountains of Genoa rising in the form of an amphitheatre.

All our senses are ravished by a spectacle so majestic; but when thought pauses on the Italian continent, the soul mournfully recoils on herself, dismayed to witness the effects of the fury of man. Those monuments which the genius of the arts, and the patience of industry, have raised at so vast an expence; those walls the children of the neighbouring rocks, constructed with so much care and solidity, sink almost in an instant under the destructive blows of barbarity, of hatred, of jealousy, and still more promptly fall before the terrible art of war. The hand of time is less cruel: it destroys slowly, and an admirable order reigns even in the disorder of which it is the cause. The awful commotions of numerous bursting volcanoes have desolated the land as far as the eye can see,

(*f*) The distance being about fifty leagues.

(*g*) Eighteen leagues.

from the Ligurian Alps to the nine hills of Mount Circe; but the effects even of these are less discernible than the devastation, and the sudden and continual changes caused by the human passions, and the inconstancy of mankind. All the convulsions of volcanic nature present to the naturalist, substances torn from the unexplored depths of the earth, which, but for this terrible phenomenon, had never been known; while the dreadful effects of human wrath leave nothing to mark their course, but the ruin they have made. A multitude of cities have disappeared; forests have sunk beneath the axe; the earth has ceased to be cultivated; the human race is swept from its surface; and the finest districts now furnish but a retreat for reptiles, for nocturnal birds, and for corruption.

Mount della Capanna is but a mass of granite; it is 1006 metres 61 centimetres (*h*) in height above the level of the sea; it is sterile. From its sides descend numerous fountains, whose waters are clear, light, agreeable to the taste, and salubrious in no common degree. United they form the streams which cause the fecundity of the chesnut trees, that cover the greater part of this canton, the most populous in the

(*h*) Five hundred fathoms.

Isle of Elba. The summit of this mountain, often lost in the clouds, affords an asylum at the return of the season to many birds of passage. I have seen there two pelicans *(pelecanus onocrotulus)*; martins *(hirundo apus)*, which exceed the falcon in rapidity, and in the length of their flight; and great numbers of peterels *(procellaria pelagica)*, known to the navigators under the name of storm birds.

The riches of this canton consist in its chesnut-tree plantations. This precious tree, of which the Celts so wisely formed woods in ancient days, is of much value to the carpenter; it lives a very long time, frequently reaches an immense size, and requires no culture. All the attention it claims is, to supply, when the little earth of which it stands in need is carried away by the waters, a little dry wall to support it; this frequently causes a wood of chesnut trees greatly to resemble a plantation of olives. The soil, which is kept moist by their shade, furnishes the cattle with green turf, and to the botanist some creeping plants, among which may be observed the monotropus, with flowers of a pale yellow, the polytrichum, the digitalus, and the hellebore.

The chesnut-tree blooms in June. The shells which contain the fruit open of themselves at the beginning of November, and let fall the mealy

chesnut. The produce of a tree is usually from six to eight sacks. Each sack sells for about four francs, so that the average produce of a tree is about 28 francs.

The olive, which in Tuscany can bear a fortnight, or even three weeks' frost, can hardly live at the foot of Mount Capanna. Sometimes its vegetation is found totally suspended by the intense cold which prevails; but more frequently they are overpowered by it, and rot.

On two little neighbouring granitous hills, at the N. E. part of the mountain, the village of Poggio and the town of Marciana appear.

As the site of these two places render them very disagreeable in winter, their inhabitants retire to the surrounding places—to *Pratesi*, a little hamlet situated opposite the Island of Corsica; to Cape *St. Andrea*, on which there is a beautiful plantation of cypress; to *La Marina*, a port where there is good anchorage for vessels of 50 or 60 tons, and of which the position is agreeable, and the environs fertile; and to *Prochio*, which occupies the side of a valley, gently inclining towards the gulph of that name.

The population of this canton is 2700 souls: viz. at Marciana, 1200; at Poggio, 600; at La Marina, 650; at Pratesi, 150; and at Prochio, 100.

Three miles to the N. W. of Marciana, at a place called *Il Macciarello*, near the stream which separates the Cape *Montaro*, and the little creek *La Conca*, we find on the sea-shore a grotto, commonly called *La Cava dell' Oro*, the Mine of Gold. The entrance is difficult: it is made so by thorny briars, by earth falling in, and by the surf of the sea when the wind blows S. E. (the Sirocco). The earth of this grotto, which extends for several miles, is pyritous, and of a dull rusty yellow; it contains light shining lamina of sparkling marcassites. Their yellow colour sufficiently resembles that of gold to impose upon many; some would have it believed, that these lamina are of the same nature as those of auriferous rivers, such as the Rhone, the Tagus, Rio de la Plata, &c.; and they even show ear-buckles and rings, which they assert to have been made of the gold extracted from this mine. I have found in it some tolerably good stalactites of a light blue colour. These things concur with a scrupulous analysis of the earth, to prove, that the *Cava dell' Oro* is nothing but the abandoned gallery of an ancient mine, or vein of yellow copper, the bed of which is a quartz in the interstices of a calcareous schiste.

This mine is not the only one of this nature in the Isle of Elba. Near *lo Stagno*, above *la*

Marina, a little marsh, which is dried up in summer, there is another tolerably deep gallery, of which the earth is of an ochreous copper brown. The humidity which prevails there, causes a small quantity of that rust to be found, which is called *verdigris*.

I ought to mention the *Spioggia dell' Ottone*, near *San Giovanni*, where it is said a copper mine has been discovered. The quantity of earth which has been thrown up, made it impossible for me to ascertain this with certainty!

Many authors, and among others the writer of the book *de Mirabilium Auscultatione* (falsely ascribed to the naturalist of Stagira) (*h*), mention copper mines in the Isle of Elba, and speak of the inhabitants being employed in making household utensils of their produce. The presence of this elastic and sonorous metal, which alchemists have designated Venus, on account of the facility with which it unites itself to other metals, is nowhere more apparent than in the iron mines of Rio, and in the loadstone mountain; but as the proportion of copper is not equal to the abundant masses of sulphur, a marcassite mine is formed which crystallizes in cubes, or in octohedral figures.

(*h*) Aristotle.

The lithologist, besides the granitous rock in the district of Marciana, will find there collected an argillaceous schiste, calcareous spath, pyramidical and triangular, greenish serpentine, a crystal of transparent rocks; a quantity of quartz, varieties of argil, masses of loadstone covered over with a white spongy substance, of the nature of that which covers the zoophytes, &c. &c.

The botanist will find, in addition to the chestnut plantations, which are principally seen near Marciana, and the place called *il Marcojo*, and the superb cypress trees of the Madonna del Monte, the following plants:

Quercus suber.
——— ilex.
Carpinus betulus.
Myrtus tarentina.
Rhamnus paliurus.
——— frangula.
Sagittaria sagittifolia.
Chenopodium album.
Herniaria hirsuta.
Asclepias vincetoxicum.
Monotropa hypopithys.
Poterium sanguisorba.
Melittis melissophillum.
Cytisus argenteus.
Evonymus europæus.
Geranium gruinum,
——— malacoides.
Convolvulus corsicanus.
Glecoma hederacea.
Anchusa officinalis.
——— tinctoria.
Hibiscus palustris.
Asphodelus fistulosus.
Convallaria verticillata.
Pastinaca opoponax.
Imperatoria ostruthium.
Erica vulgaris.
——— scoparia.
Cucubalus otites.
Ruta graveolens.
Ruta affricana.
Arbutus unedo.
Lithospermum arvense.
Malva sylvestris.
Daphne alpina.
Cyperus esculentus.
Fumaria officinalis.
Nerium oleander.

Veratrum album.
———— nigrum.
Stantolina tomentosa.
Anconithum anthora.
Bryonia alba.
Primula veris.
Tubipara purpurea.
Urtica pilulifera.
Artemisia maritima.
Teucrium chamæpithys.
Nymphæa alba.
Clematis viticella.

NOTICE

OF THE

ISLANDS

IN THE

TYRRHENIAN SEA.

'Rerum Natura, sacra sua non simul tradit. Initiatos nos credimus: 'in vestibulo ejus hæremus. Illa arcana non promiscuè nec omnibus 'patent; reducta et in interiore sacrario clausa sunt. Ex quibus aliud 'hæc ætas aliud quæ post nos subibit, adspiciet.'

SENEC. Natural. quæst. lib. VII. cap. 31.

NOTICE

OF THE ISLANDS OF THE

TYRRHENIAN SEA.

GENERAL REFLECTIONS.

THE multitude of islands, and points of rocks, which surround the coasts of ancient Etruria, and gem that portion of the Mediterranean which geographers of the most distant ages have called the Tyrrhenian Sea, have more than once arrested the attention of naturalists and philosophers. They were the sources of all the known systems and theories of epochas of the earth. According to some, these islands are the ruins of an ancient continent, whose foundations had been shaken to pieces by one of those dreadful catastrophes of nature, the traces of which are generally found imprinted on the surface of the globe. According to others, they belong to

Italy, from which they have been detached by violent shocks. What will undoubtedly astonish my readers, is the assurance given by a modern *(a)*, that the isles of the Tyrrhenian Sea are the remains of that Atlantia, rendered so famous by the two best dialogues of Plato *(b)*, and still more so by the sophistries and paradoxes advanced to prove this position. Baretti places it in the Canary Isles *(c)*, Carli finds it in America *(d)*, the pious Baër wishes it to be Palestine *(e)*, Rudbect transports it into Sweden *(f)*, Sonnini thinks it lay in the Archipelago, towards the Libyan coasts *(g)*; Delille de Sales, and Graberg, mark out more particularly Corsica, Sardinia, and the other adjacent isles, as its most certain ruins *(h)*. I do not wish to resolve the problem, nor is this the place, according to the expression of the philosopher of

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(*a*) Delille de Sales, History of the Primitive World, vol. VI. p. 159, and the following.

(*b*) Timée and Critias.

(*c*) Letters on the Origin of the Sciences, and on the Atlantia.

(*d*) American Letter.

(*e*) Historical and Critical Essay on the Atlantia.

(*f*) Atlantica, vera Japheti posterorum sedes ac patria.

(*g*) Travels in Greece and in Turkey, chap. x. tom. II. p. 224.

(*h*) Loco citato, et Annali di Geog. e di statistica, tom. I. p. 35.

Bourdeaux *(i)*, to rub and file one's brain against those of others to affirm or combat this new hypothesis; but as one must not confound the observations of facts, with theories more or less ingenious, which anticipate or bewilder our judgment, it is only necessary to say, that there exists among these different isles such well defined boundaries, notwithstanding their short distance from each other, that it requires a creative imagination to find the points of contact which ought to form one, perfectly united.

The granite mountains of the Island of Elba, in front of Corsica, are shaped into a peak, whilst the opposite part offers to the sight an immense plain, rich in vegetation, and hot mineral waters. Pianosa is a rock of tufa, formed by incrustations and by the deposites of water, and situated much below the level of the Island of Elba; Monte Christo has no lithological connexion with Giglio, which produces iron; Gorgona is a calcareous mountain, and Capraja the seat of an ancient volcano; the coasts of Bonifacio (island of Corsica), are rocks of tufa, mixed with fragments of shells or sea animals, whilst those of Logud'oro (Sardinia), are granite, highly elevated, and enclosing little filaments of gold, silver, &c. It is not thus with the low shores of

(*i*) Essays of Montaigne, Book I. chap. 25.

Flanders and the opposite coast of England. The two sides present the same elevation above the surface of the water, the same internal structure, the same beds of clay, of argil and sand, often mixed with the decayed remains of vegetables. One thick bed of bluish or blackish clay, unmixed with foreign bodies, under superior beds; the same lower beds between the banks of earth; in short, all the signs of their former union.

My intention is to throw a true and rapid glance on each of the islands in the neighbourhood of Elba. I shall esteem myself very happy, if this part of my work is not destitute of interest. The principal islands of the Tyrrhenian sea, are Sardinia, Corsica, Elba, Giglio, Monte Cristo, Pianosa, Capraja, and Gorgona.

PIANOSA.

PIANOSA takes its name from its shape, resembling that of a plane. It is twelve miles round, and is scarcely raised above the surface of the sea. This island is absolutely destitute of ports, and its dangerous shore, caused Maritanus Capella to say of it, that it is: Fallax navigantium, mentiesque propinquita (*k*).

(*k*) Lib. vi de Nupt. Philos. et Mercure.

Its soil is very fertile; the sportsman finds here rabbits, hares, and a great number of birds. In considering the natural productions of this patch of earth, usurped in some degree from the immense mass of water which bounds it, the naturalist remarks a plentiful fountain of soft water, and agreeable subterraneous grottos. Amongst the prolific vegetation which this island presents, the olive tree recals to mind its misfortunes. Pianosa was very well peopled till the 7th of August, 1557, when the Turkish fleet, commanded by the Corsair Dragutt, took possession of it, burnt the village, destroyed the tower which defended it, and made slaves of all the inhabitants. Since which, become a desert, it was covered with wood, and served as a retreat for pirates, who were incessantly annoying the Italian coast, and not unfrequently making descents on the Tuscan and Roman shores. The inhabitants of Campo and Marciana, in the Island of Elba, however, from which it is distant about twenty miles, succeeded in driving out the natives of Barbary, and restoring Pianosa to its ancient splendour. But after nearly twenty years of a long resistance, and a considerable loss on both sides, the colonists were overpowered by numbers, and 300 of them carried into slavery. This disgrace has banished the cultivator far from Pianosa, which demands but labour to produce rich harvests. It was to

Pianosa, that Augustus, in the decline of life, harassed by the complaints of Livia, and yielding to the ambitious projects and perfidious solicitations of that corrupt woman, exiled the last of his grandsons, Agrippa, a young man indeed without education, unpolished, and ferocious, and who foolishly valued himself on the great strength of his body; but who, as Tacitus (*l*) said of him, was not polluted with any crime. This act of weakness on the part of the Emperor, sanctioned by a senatus consultum, led to the adoption of the infamous Tiberius, the son of the pontiff Claudius Nero, who placed himself at the head of all the mal-contents, after the death of Julius Cæsar, and instigated the war in Campania (*m*). Augustus, however, ashamed of the error he had committed in disinheriting his grandson, wished to recal him to the succession of the empire. It has been even said, that he went secretly to see him in his exile, accompanied by Fabius Maximus (*n*). This inconsiderate step, and the repentance that the Emperor expressed, excited more and more the hatred and resentment of Livia and her son. The first act of Tiberius on his accession to the throne, was to murder Agrippa, who, though

(*l*) Annal. lib. 1, cap. 3.

(*m*) Paterculus, Hist. lib. 2, cap. 75, Suetone in Tiberio.

(*n*) Plin. Hist. Nat. lib. 7, cap. 45. Tacite, loco citato.

unarmed, made a vigorous resistance in defence of his life.

The channel which separates Pianosa from Monte Cristo, though broad, is dangerous, particularly at high tide, from a shoal which is hardly above the level of the water.

MONTE CRISTO.

Monte Cristo, called by Pliny Oglosa, according to Ortelius, and Artimesia, according to Dupenit, is distant forty miles from the Isle of Elba. This is a small and desert island; formerly it was tolerably well peopled, but now it is only a retreat for pirates. It is ten miles in circumference. Wild goats and large trees are to be found there: together with the olive and the vine, which are left to the care of nature; and a fountain, whose abundant streams flow beneath an arch erected by the Romans. The water is delicious. During my tour through this island, the sixth of March, 1803, I beheld, issue from the rocks which jut into the sea, a species of swallow which is called riparia, because she builds her nest on the sea coast; but soon after perceiving a number of petrels and some porpoises on the surface of the water, which are generally considered to be presages of boisterous weather,

we set all sail, and with all possible speed gained the port of Giglio.

GIGLIO.

THE island of Giglio, named by the Latins Ægenium or Igilium, is situated opposite Mount Argentaria, 22 miles from Orbitello, and 60 from the Isle of Elba. It contains 15 square miles, and abounds in hills covered with woods; we discover there fine marble, and a granite composed of quartz of a dirty white, with superabundance of red feldspar and crystal schorls, a sort of tourmalin without any electric property. It produces much wine, and the grape is good. In 1652, a copious iron mine was opened, the ore of which was prepared in the smelting furnaces of Cecina, on the coast of Etruria. The mine was afterwards abandoned. The iron which it produces is an oxyd in small micaceous laminæ, without regular crystallization, or magnetic property, either in its natural state or when calcined. The earth which serves it for a bed is siliceous, white, and opaque.

The population of this island consists of 900 inhabitants who occupy themselves with fishing. It is defended by a fort where the grand Duke of Tuscany maintains a garrison.

Barbarossa pillaged and reduced to slavery the 700 individuals whom he found there in the year 1544.

SARDINIA.

SARDINIA is the largest and richest of all the islands in the Tyrrhenian Sea. Pausanias (*a*), Strabo (*b*), Diodorus (*c*), Pomponius Mela (*d*), and Silius Italicus (*e*) have boasted its fertility, its riches and population, and Polybius even said of it, after the sixty years war which it sustained against the Roman forces: Insula magnitudine, et multitudine hominum, et omnium fructuum genere excellens (*f*). It has greatly declined since that period; at present it has not half hands enough to render its territory of value; it is competent to maintain 2,000,000 inhabitants, and its population is scarcely above 500,000. Industry is almost banished from the country, and its manufactures are coarse. The commerce consists in corn, grain, dried pulse, wine, oil, coral, cheese, &c. Cotton has been cultivated

(*a*) Achaic. lib. 7. Phoc. lib. 10.
(*b*) De situ orbis, lib. 5.
(*c*) Bibliot. hist. lib. 5, cap. 2, et 14, lib. 6, cap. 4, et 9.
(*d*) Corogr. lib. 2, cap. 2.
(*e*) De Bello Punico, lib. 12, v. 343, et sep.
(*f*) Hist. Rom. lib. 1, cap. 3.

with success for some years; and experiments have proved that the sugar cane and coffee succeed there. The fruits, the most abundant are grapes, figs, oranges and citrons, cherries, apples and pears, chesnuts, &c. The oak, known to botanists under the name of ilex, and elighe, by the Sardinians affords an acorn of which they make bread, in the province generally called Oliastra. They possess a great number of cattle, some very fine sheep, and above all two or three sorts of horses, of which one is excellent and very beautiful. Nineteen Sardinian horses, sent to the king of Spain, Philip the Third, were much admired at Madrid (*g*); and amongst the presents that Charles Emmanuel Victor made in 1740, to the king of Portugal, ten horses taken from the King of Sardinia's stables (*h*). The extent of the island is 175 miles in length, by 100 in breadth; it superficies 11,500 square miles, 115 to the degree. The Romans took it from the Carthaginians, and made it one of the granaries of Rome. After the invasion of the northern tribes, it was conquered by the Moors, and was a long time the theatre of the hatred and pretensions of the Genoese and Pisans. In 1330 James II. King

(*g*) Vico, Hist. gen. de la Isla y reyno de Sardena, p. 1. c. 3.
(*h*) Cetti, Hor. nat. della Sard. tom. 1.

of Arragon took possession of it. In 1718, from the yoke of Spain it passed under that of Austria, and from this house to that of Savoy.

The air of Sardinia is as unhealthy in summer as the soil is productive. Doctor Antonio Leo (*i*) however pretends that the reported insalubrity of the Sardinian air is one of those too numerous prejudices created by ignorance and dishonesty. His dissertation is a long invective against all those that are not of his opinion. Those are facts upon which one cannot but agree. What is certain, is, that one always sees seamen enjoy good health on board their ships, whilst the islanders suffer from the vast uncultivated plains in the interior, until within a short distance from the shore, where one beholds the unwholesomeness of the air in direct ratio with the beauty of the place, and an inverse ratio from the causes acknowledged as unwholesome on the continent, when the shores of many little lakes which discover their beds of mud in summer, are less dangerous than the bottom of many delicious vallies; we seem to possess a right to repeat with Cetti and Galanti, that from the season of flowers until the first rains of winter, Sardinia is commonly an

(*i*) Sulla cosidetta Sarda intemperie, Cagliari, 1801. In 8vo.

unhealthy country; that the heat there develops some inherent principle which rises in a gas more dense than the atmospherical air. The real proof of the unwholesomeness of Sardinia is the intermittent fever, which is always a quartan, tertian, or double tertian of a pernicious nature, which resists the bark, degenerates into a slow and continued fever, and to a marasmus necessarily mortal, so that at the commencement it is difficult to judge whether you are violently attacked or slightly affected.

You do not meet, in Sardinia, either wolves or other ferocious animals. The tunny fishery is very considerable, and of singular advantage to domestic economy. Many *Madragues* gain 25000 franks. There is abundance of game. Sardinia offers immense riches to the naturalist. The geologist finds there primitive mountains, all the productions of volcanoes, and abundant mines of gold, silver, copper, very rich ones in iron, lead, antimony, manganese, &c. which the ancients wrought, but from which the moderns have failed to derive all the advantages which they offer. Although this people are miserable and very ignorant, some of the Sardinians are not strangers to science and literature. From Ennius, who was the first to excite amongst the Romans an admiration of learning and a taste for the Greek language, to the celebrated, Francesco Cetti, who wrote the

natural history of Sardinia, and Gemelli, who traced the manners and customs of its inhabitants; a long series of authors distinguish the annals of this isle. Amongst the literati, who are at present its honour, friendship imposes on me, the delightful obligation to name the indefatigable Richard de St. Real, whose extensive knowledge in chemistry and in mineralogy, induces a hope of some important service being thereby rendered to the geology of this country. This modest and learned man has made interesting experiments upon light in his researches into the nature of the green substance which colours plants. The love of the sciences has been the origin of these experiments, and friendship permits not that they remain longer in oblivion. I ought also to cite D. Ludovico Baille, of Cagliari, who has for a long time been preparing a Civil and Literary History of Sardinia. D. Francisco Carboni, profoundly versed in the Greek and Latin languages, and professor of eloquence at Sassari; Alberto Azani, author of a good statistical work, on this important island (*k*).

The principal towns of Sardinia are, Cagliari, which has the largest and safest roads in the Mediterranean; Sassari, Oristagni, Alghero,

(*k*) Essai sur l'Hist. Geographique, Polit. et Nat. de la Lardaigne, in 8vo.

Terra-Nova, &c. Its ports are, Porto Torres, Porto Conte, Porto Scusi, and several others.

CORSICA.

I propose to treat separately of this island, one of the most interesting in the Mediterranean for natural history, and so celebrated in the annals of Clio for its political revolutions, the great men whom it has produced, and for having, at two remote periods, served as an asylum to the Phocians, flying from the tyranny of Alexidêmus, and to the Spartans, who abandoned the banks of the Eurotas, not yet rescued from ignorance and oppression.

The materials that I have collected on the spot in September, October, and November, 1805, and in the records of nations, which successively occupied Corsica, induce me to think that my work will contain a perfect account of that island.

CAPRAJA.

This island is 22 miles round. It takes its name from the prodigious quantity of wild goats which it produces. The species is very

fine, and as the Roman cultivator said (*l*) "Quos alimus, a capris feris sunt ortæ," their flesh is delicious, and the exercise of hunting them affords good amusement. Its population is computed at 1500 individuals, all addicted to naval pursuits, and in fact born fishermen. It is the ancient crater of a volcano. It is formed of lava, schoria, and ashes. There is also found there pozzolane and that mixture of ashes and pumice stones emitted in volcanic eruptions, from which springs that light and delicate stone, called by De Saussure and the Neapolitans, Tufa. The crater of the volcano is now occupied by a little lake. Capraja is agreeably situated, 30 miles from Elba. It was for a long time under the government of its own lords. Jacopo da Maro was in 1507 deprived of it by the Genoese. Many islands of the Mediterranean were formerly called, and even at present bear, the name of Capraja. The one which can most justly dispute that title with the volcanic isle mentioned above, is that of Tavolara, one of the four great islands near Sardinia. Its fine goats produce a rich and excellent milk. Their skins form a considerable branch of commerce, and supply the inhabitants with cordovan. But the island of

(*l*) Varro, de se rustica, lib. ii. cap. 3.

Tavolara derived its celebrity from the shell-fish, producing purple, and it will acquire much more, when they work its immense quarries of beautiful marble.

GORGONA.

At an equal distance from Cape Corsica and the port of Leghorn, Gorgona, which the Romans called Urgo, and which Rutilius mentions in these two verses,

> Assurgit ponti medis circumfluo Gorgon
> Inter Pisanus Cyrnæicumque latus,

rises up in the form of a mountain. It is covered with wood, where game is abundant. On its summit is a signal tower, which communicates with Leghorn. Gorgona is peopled only with fishermen. A garrison is kept there. This island is ten miles round. At the time of my passage, the 27th of April, 1803, they killed there a superb flamingo, which was immediately sent to the cabinet of Natural History at Florence. This bird, an inhabitant of Africa, is nearly the size of a goose, with legs of a pale red, so long, that scarcely any thing but stilts surpass it in this respect. Its toes are webbed, like those of water-fowl, though it does not

swim, and only frequents the shore. It has a long and slender neck, a short head, but rather fat; its beak is, in particular, very extraordinary, as to its proportions and its form: this beak is turned upward; it is long, very broad, partly of a lively yellow, naked, and denticulated, and bends all at once about the middle nearly in a right angle. The upper mandible is much smaller than the lower one. The head, the throat, the neck, and all the body, are of a lively white, tinged with a rose colour; the scapulary feathers and covering of the wings are of a very lively red, and the quill feathers very black. This colour is that of the second year of its age. The older this migratory bird grows, the more beautifully red is its plumage. The ancients boasted of the delicacy and exquisite taste of its flesh. It feeds upon shell-fish, the spawn of fish, and aquatic insects.

THE END.

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